

LAND, A LIVING *and* WEALTH

THE STORY OF FARMING
AND SOCIAL CONDITIONS
IN

WESTERN CANADA



GRAND
TRUNK
PACIFIC

A SONG OF THE RAIL

BY WILLIAM J. SHANKS

FROM the Athabasca basin to the southern border plains,

Where the prairie flowers and grasses bloom with countless suns and rains;
From the silent mountain passes to the lone Keewatin trails,
They are breaking Nature's slumbers with the music of the rails.

Over mountain, crag and torrent; through the forest hills and breaks;
Over leagues of treeless hinterland around the mighty lakes;
Sons of Vulcan! Hear them swinging through the vastness into space!
Hear the rhythmic sledges ringing out their welcome to a Race!

From the Old World's human maelstrom to the New World's realm of peace,
Where the prairie skyline beckons and the wars of Mammon cease;
Human eyes are turned with longing—human hopes are circling high,
As the steel-tongued heralds carol to the wild-rose and the sky.

Like the thrush when day is dying—or the lark when day is young,
Are the matins and the vespers of the ribbon-boned pathways sung;
Wake, thou virgin prairies, wake! and greet the heroes of thy dream,
Hear the bridal song of Industry—the hymn of Rails and Steam!

Yield thy gifts, O Land of Promise!
Homeless millions turn to thee;
Chains of poverty are broken and the bondsman shall be free;
Through the trackless void we're coming, with the morning star o'erhead,
World-old prayers and tears we'll answer with an avalanche of Bread!

Where the bison made his wallow, and the Indian tepees passed;
Where the tardy sons of Empire conquer first and harvest last;
Hear the vibrant rails go whispering, in their paths from sea to sea,
Singing Hope, and Peace, and Plenty—for the Canada to be.



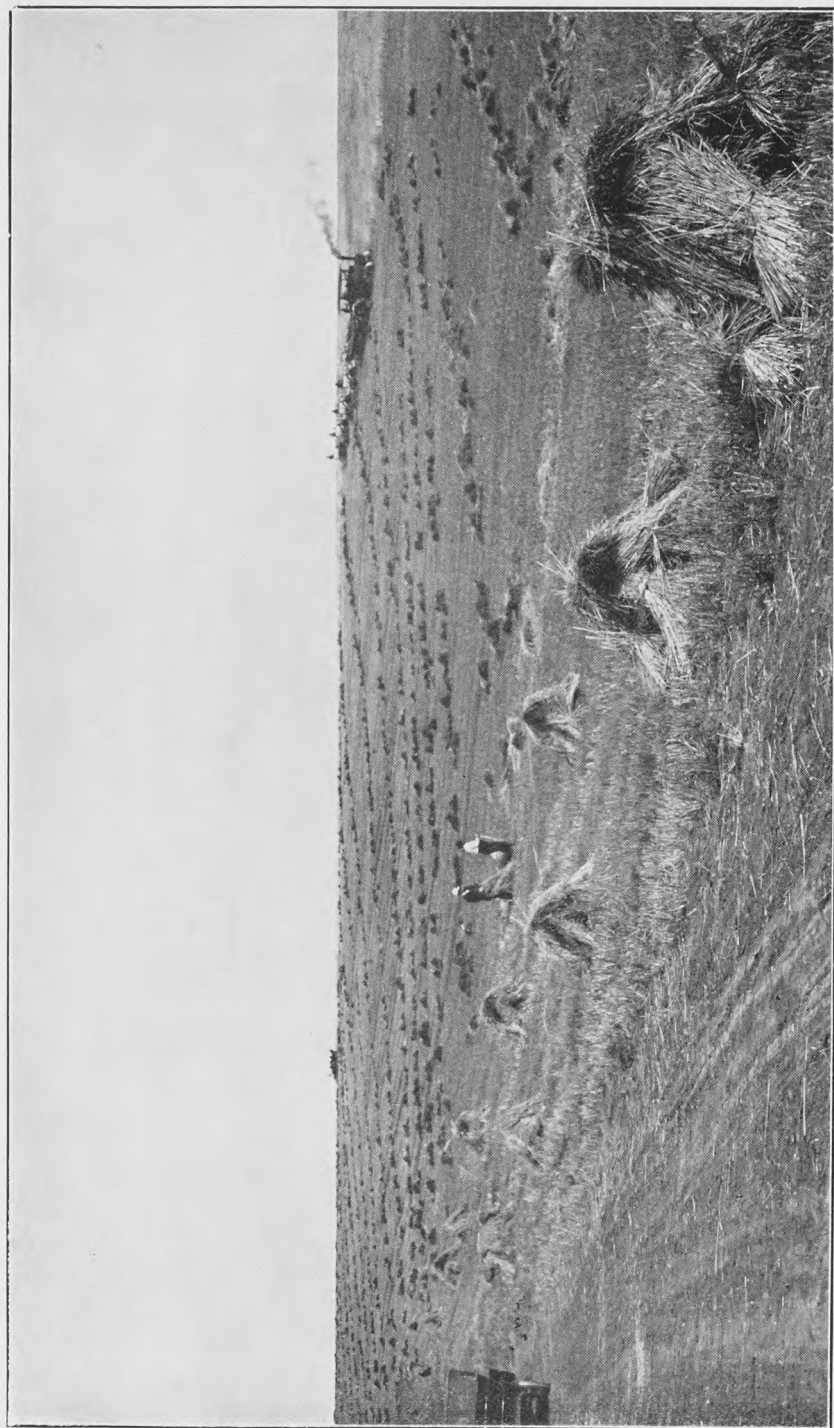
LAND, A LIVING AND WEALTH

The Story of Farming and Social Conditions
in Western Canada

A series of articles written by practical men
on subjects of interest to those looking
to better their present condition

Issued by
GENERAL PASSENGER DEPARTMENT
GRAND TRUNK PACIFIC RAILWAY
WINNIPEG, MANITOBA

FEBRUARY, 1913



MILES OF WHEAT FIELDS IN SASKATCHEWAN

Soil Physics of the Territory Tapped by the Grand Trunk Pacific

By Professor CLIFFORD WILLIS

Editor "Orange Judd Northwest Farmstead." Formerly Professor and Chief in Agronomy at the South Dakota State College, and in charge of the soil surveys. Before that Professor Willis was instructor and First Assistant in Agronomy at the University of Illinois. He is an authority on soil physics and contributor to leading farm journals.

It was my privilege during the month of August, in the summer of 1911, to travel nearly 1,000 miles on the recently completed Grand Trunk Pacific Railway from Winnipeg west, and to investigate in that journey as fine a general farming country as it has ever been my privilege to see. My investigations did not consist of sleeping-car window observations, although I did see a great deal that interested me from the windows of the car in which I rode. My investigations took me miles from the railway line and I not only had an opportunity to make actual tests of the soil, but perhaps what was more to the point, I had a chance to talk to men who were farming the land and getting wealthy off it.



PROF. CLIFFORD WILLIS

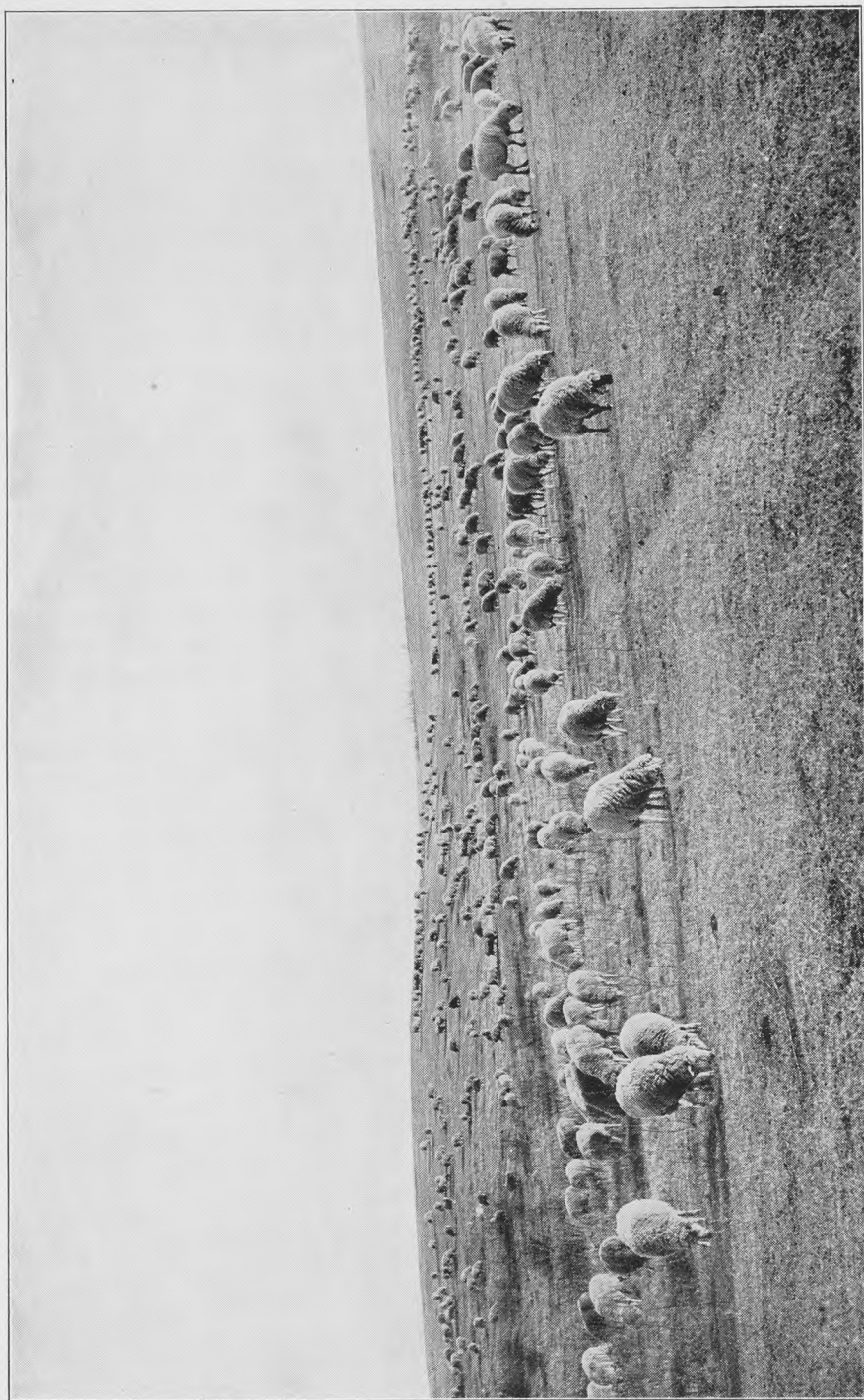
In this short article, I wish to discuss the physical properties of the land lying along the Grand Trunk Pacific Railway. In doing this, I wish to consider the three principal soil types:

SILT LOAM.—This type of soil is a somewhat granular and coherent silty loam, varying in depths from 12 to 17 inches, the depth varying with the topography of the land. Where more rolling, the surface soil is shallow and where level it is somewhat deeper. The soil crumbles and pulverizes readily, is porous and absorbs moisture quickly. The color varies from a light to a dark brown, depending upon the amount of organic matter present and also conditions as regards rainfall. As a rule this type is uniform in texture.

The subsoil varies quite a bit, in fact there is no distinct line between the surface soil and the subsoil, being rather a gradual gradation. In this type generally the subsoil is a mottled gray and yellow clayey silt which often shows dark streaks or spots due to the presence of iron. It is somewhat plastic, but as a rule more friable in the lower depths. The surface is undulating to gently rolling. The undulated topography is near the water courses and as a rule has good surface drainage.

The surface of this type is of such a physical makeup and the drainage being well developed, it makes one of the best types of soil for conserving moisture. All crops commonly grown in the latitude traversed by the Grand Trunk Pacific Railway are grown upon this type, in fact it is one of the best wheat soils in Canada.

CLAY LOAM.—This type is a somewhat granular, sticky clay loam, color varying with depth. When wet it is quite coherent and this characteristic gives it the local name of "gumbo," although it is not the real "gumbo" of the land traversed by the Grand Trunk Pacific Railway. This type is strictly a clay loam, becoming more tenacious as the depth increases. It contains a large percentage of silt, but it contains enough clay to make it plastic. When it contains a considerable amount of



SHEEP RANCH IN ALBERTA, ON GRAND TRUNK PACIFIC RAILWAY

Grand Trunk Pacific Railway

moisture it is darker in color, but becomes lighter in color as it dries. This type possesses the power of granulation in a very remarkable degree. When it dries it divides into small irregular cubes often to a depth of a few inches which forms a sort of mulch. The soil usually is a moderate gray or a yellow gray silt, plastic but becoming more tenacious in the lower depths. Occasionally iron stains or dark streaks are seen.

The same crops as grown in the silt loam type do especially well on this area, in fact it is a very good oat and barley soil.

GUMBO.—This type is probably as extensive as any one type throughout the area traveled, in fact I wish to consider under the "gumbo" the soils a little bit heavier, from a clay loam to the stiffest and most plastic clay, in fact the most distinctive characteristic of this heavy type is the sticky nature which has given to it the local name of "gumbo." The soil varies considerable in texture, in color, but its sticky nature is a constant feature.

In texture it ranges from a silty clay loam, a silty clay, to a heavy clay. The clay is usually of a yellowish brown to a dark brown, but varies from a decided yellow on the one extreme to a black on the other, in fact we made borings to a depth of 40 inches and the soil was the same all the way down.

The subsoil varies from a silty clay to a yellowish brown color, while in few areas it is almost black. A very characteristic feature throughout this type is the cracking of the soil upon drying. In general, the heavier the texture, the larger the cracks. This tendency to crack or granulate, causes the surface soil to become very loose and is a very valuable property, as it enables the farmer to secure a proper seed bed much more readily than could be done otherwise, while it also permits the rains to enter much more easily.

The heavy soils under this type are naturally very strong, but their sticky nature makes them less desirable to work than those of lighter texture. If plowed when it is too wet the soil bakes into hard clods, difficult to cultivate, while if allowed to get dry it becomes too hard to cultivate. The soil is very retentive of water and if a mulch is provided after rains it can be conserved. Unless this is done, the moisture is lost very rapidly and the crops suffer during the periods of insufficient rainfall.

The careful farmer will plow and cultivate when the soil has dried out just enough to not adhere to the plow, for under this condition, the soil breaks up into small granules and allows the formation of a good mulch. When plowed properly, the mulch becomes very effective, especially when there is a good supply of organic matter.

This soil is splendid for the growing of wheat, oats, flax and barley, in fact the yields of small grain on this type were the best that I have ever seen anywhere in the best tilled fields in the United States.

In the growing of a bushel of oats it requires 21 tons of water and the amount necessary for all crops is appalling if we stop to consider one moment. In the handling of any type of soil along the Grand Trunk Pacific Railway, it is necessary for us to remember that any system of cultivation and cropping that tends to reduce the amount of organic matter in the soil, destroys granulation, lessens the water holding capacity, lowers the temperature and interferes with proper ventilation; so that if we practice a system of crop rotation and cultivation, which tends to put back into the soil, as much as we remove in crops (also all manure produced on the farm), the soil then is more granular, has a greater capacity for holding water, is warmer and better ventilated.

Soil Fertility along the Grand Trunk Pacific

By Professor JAMES H. PETTIT

Authority on soil fertility. Dr. Pettit was honored by the German University of Gottingen with a doctor's degree for his work in soil fertility and soil bacteriology. He is a graduate of Cornell as well as of the German University and is co-author with Dr. C. G. Hopkins of the "Laboratory Manual in Soil Fertility." Professor of soil fertility at the University of Illinois, and chief in soil fertility at the university's experiment station.

From Winnipeg west the Grand Trunk Pacific traverses some of the richest soils in that fertile area once covered by the old glacial lake Agassiz. The alluvial deposits of this lake are the foundation of the deep fertile silt and clay soils of this region. Some of them, even after twenty and twenty-five years of almost continuous cropping with wheat or other small grain, still produce in a favorable year like the present thirty-five or forty bushels of wheat and eighty or ninety bushels of oats per acre. The average yield of wheat in the province of Manitoba, which was originally largely occupied by this old lake, during the ten years 1900 to 1909, was 18.3 bushels, while that of oats was 38.8 bushels. These figures may be compared with those for the whole United States during the same period which were 14 bushels of wheat and 29 bushels of oats.

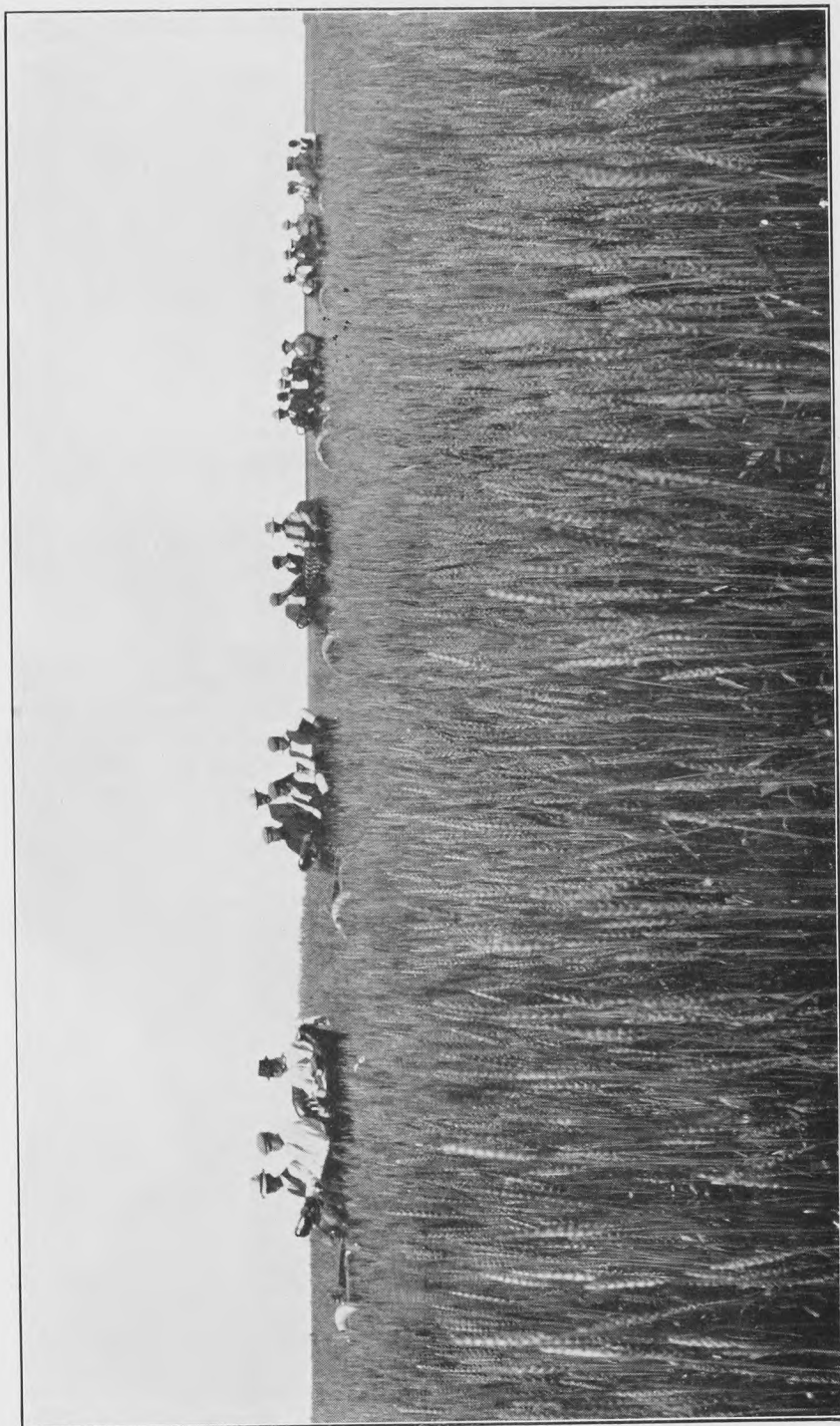


PROF. JAMES H. PETTIT

In the western part of Manitoba there is a decided increase in elevation in going up onto the second steppe of Western Canada. This continues with a very gradual slope, so gradual that the land is for the most part practically level for a distance of about three hundred miles across Saskatchewan to its western boundary, which corresponds roughly with the western boundaries of Wyoming and Colorado.

In crossing this second steppe the Grand Trunk Pacific follows for about fifty miles the valley of the Assiniboine River, goes through the drainage basin of the Qu'Appelle River and past the northern end of Last Mountain Lake into the great drainage basin of the South Saskatchewan River which it crosses at Saskatoon. The width of this latter basin where it is crossed by the Grand Trunk Pacific is about two hundred miles. For some fifty miles in western Saskatchewan and eastern Alberta the road passes with a gradual ascent through sand hills and ridges, which mark the boundary between the second and third steppes as well as that between the basins of the South and North Saskatchewan Rivers, into the latter, and thence continues one hundred and thirty miles to Edmonton, Alberta. The road is being extended westward from Edmonton through the Yellowhead Pass to Prince Rupert on the Pacific Coast.

South central Saskatchewan, from its eastern boundary to Melville and Watrous, has in general a somewhat undulating topography with here and there clumps or small areas of second growth poplar, and often ponds or pot holes, and small lakes. West of Saskatoon there are great areas of absolutely treeless prairie, sometimes almost level, and again somewhat undulating. Smaller treeless areas are also found east of Saskatoon. From Winnipeg to Edmonton it is difficult to find a single



LAND SEEKERS IN A WHEAT FIELD, NEAR SCOTT, SASKATCHEWAN

stone, and there is no waste land except the sand hills and ridges near the boundary between Saskatchewan and Alberta. A considerable part of this area is occupied by blow sand, and so is quite free of any vegetation.

Along the approximately four hundred miles of track to the eastward of these sand hills and ridges the second steppe is covered in the main with a brown silt loam soil which is well supplied with organic matter to a depth of 15 or 16 inches. The subsoil is usually a yellowish silt loam, often containing some clay. For the most part the surface contains a small amount of sand. The variations from this most common type are in both directions, so there are areas of sandy soil in some of which the supply of organic matter is not large, and on the other hand there are areas of heavier clay soil. The latter are usually found in the lower lying areas. They are doubtless the most fertile soils in the province, though they often offer some difficulties in handling. Canora, on a branch of the Grand Trunk Pacific north from Melville, lies in an area of undulating park, or so-called "bluffy" land. To the west are considerable areas of brush land, which is easily cleared, however. In 1909, Mr. R. E. Drennan, formerly connected with the Iowa State Agricultural College, began operations upon two sections of land west of Canora, part of which was brush. His land cost him \$5.25 per acre. In 1910 his seven hundred acres in crop returned him \$24.50 per acre. This year he has about eleven hundred acres in crop. His wheat promises thirty bushels. The soil is a brown silt loam with a little coarse sand in the surface, the subsoil is somewhat heavier, containing some clay.

In seasons when the rainfall has been above normal through northwestern Canada, nowhere was there evidence of a lack of sufficient natural surface drainage. The content of coarse sand in the surface soil, together with the present supply of organic matter in these undulating rather than perfectly level virgin soils assures good subsurface, as well as surface drainage, combined with which is the fact that the annual precipitation in Western Canada averages about 17 to 18 inches, with occasional years as low as 8 or 10 inches. The records show, however, that about two-thirds of this low rainfall usually comes at the most advantageous time for crop growth—April to September.

North of Melville the country is undulating to rolling with here and there small clumps of poplar. The soil is a sandy silt loam often containing some gravel in the subsoil. The darker colored surface soil is but 14 to 15 inches deep. This more open soil, will, however, offer a somewhat greater feeding range to the roots of crops. The settlers visited in this section are well satisfied with the conditions of soil and climate. Wheat on the farm of Mr. Weatherspoon promises at least 30 bushels per acre, some of it is over five feet in height. Mr. McCullom is producing some live stock. Realizing the necessity of maintaining the supply of organic matter, even in these new lands, he has a manure spreader and returns all manure produced to the land. His wheat yield has not been below 23 bushels per acre. Good raw land here about Melville, as in other sections, may be bought for from \$15 to \$20 per acre, the usual terms being \$1 or \$1.50 down, and the balance in ten years at six per cent. An average yield of 18 bushels of wheat per acre upon such land at present prices will easily pay for the same in three years. These figures are very conservative, and yet they show a wonderful opportunity for the man with little capital who wants to obtain a home.

About Saskatoon, the capital of the province, and located upon the south branch of the Saskatchewan, the country is in the main a somewhat undulating prairie. Here and there are considerable areas of level land, the soil of which is a deep brown silt loam containing some clay and more organic matter. The greater part

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of the land is a brown silt loam containing some sand, and is about 15 or 16 inches deep.

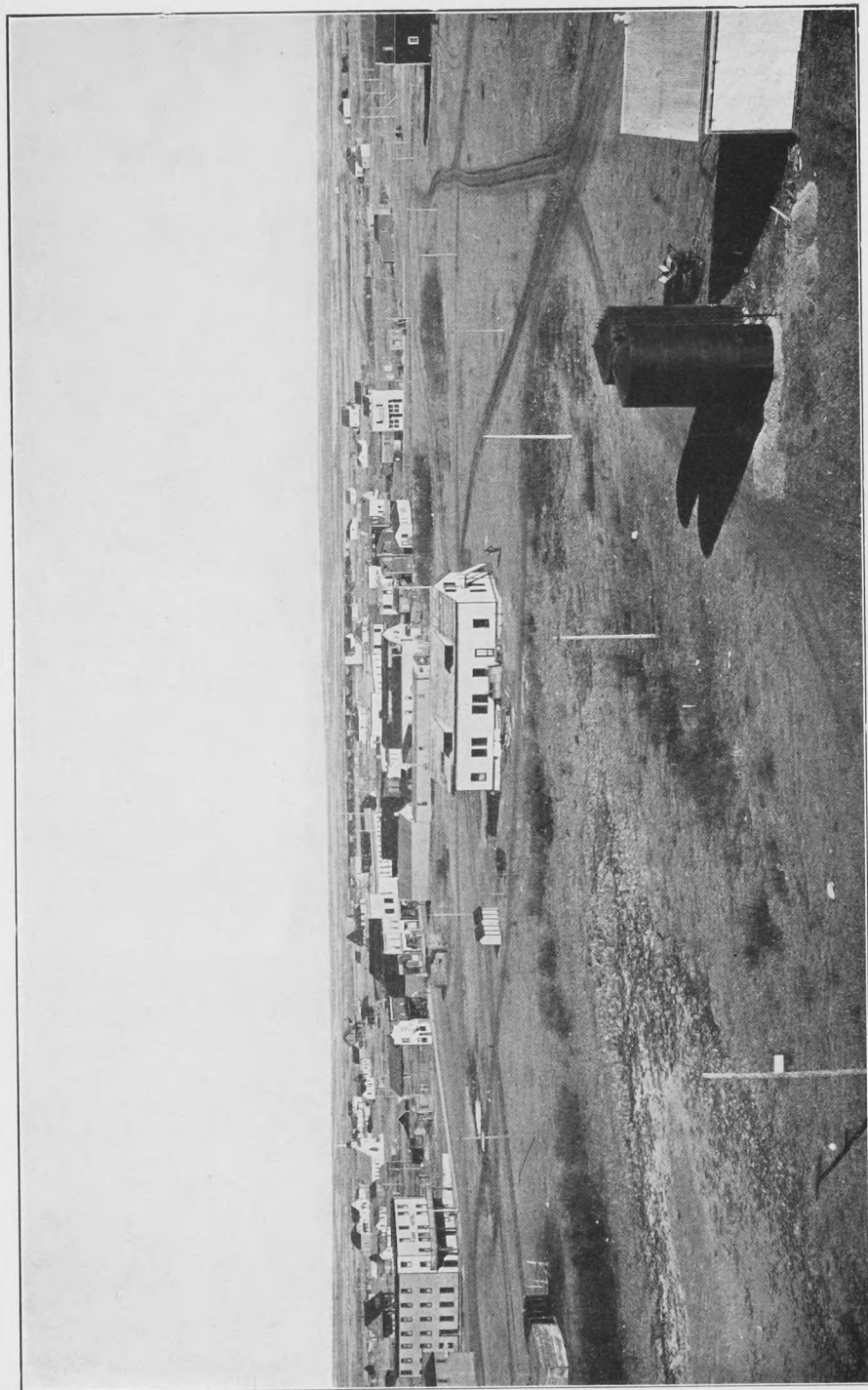
At Saskatoon is located the provincial College of Agriculture and Agricultural Farm. The latter contains about 1,200 acres under crop. The station, as well as a number of settlers in the region, have found that clover and alfalfa may be successfully grown. These crops are most important in the production of live stock, and they are much more important in maintaining the fertility of the soil as through them organic matter rich in atmospheric nitrogen may be obtained.

Some improved land about Saskatoon is worth upwards of \$100 per acre. On the other hand, there is still land to be had through homestead, or at a very low price. Wheat upon breaking stood this year up to the armpits of a six footer. About Prince Albert, on a branch of the Grand Trunk Pacific northward into Central Saskatchewan, the country is more rolling and more "bluffy," the soil being a good brown silt loam having a heavier subsoil. Immediately north of Prince Albert, which is located upon the North Saskatchewan, there are large tracts of timber, and development agriculturally has barely started. Clover and wild vetch grow in this section and the conditions are excellent for pasture. Considerable stock is already being produced here. Though this is at present the farthest north settled section in the province, still the crops usually mature somewhat earlier than they do farther south, and it is only occasionally that there is any damage from frost.

About Edmonton, in Alberta, especially in the Clover Bar District, there is a splendid undulating to rolling country partly covered with brush and small second growth poplar. The soil is a good brown silt loam, 17 to 18 inches deep, well supplied with organic matter; the subsoil contains some clay. The rainfall in this section averages somewhat heavier. Both in this region and that about Prince Albert the natural conditions seem to favor the growth of grass more than in many other parts of Western Canada, therefore the opportunities for stock farming should be somewhat better.

Red and alsike clover can be grown, and a number of trials of alfalfa have been made, one lasting over three years, shows that this crop may be successfully grown.

Last year the writer was in the Peace River country, and at points five and six hundred miles north and west from Edmonton saw wild vetch growing luxuriantly to a height of six and seven feet. There were also several other legume plants growing wild. There would seem to be, therefore, no question but that legume crops, such as vetch, clover, alfalfa, peas and beans, may continue to be grown successfully in central and southern Alberta and Saskatchewan. Judging from analyses which have been reported, the soils from Winnipeg to Edmonton are, in the main, fertile; that is, they are well supplied with the materials of which crops are made. The organic matter and nitrogen content compares well with that of the corn belt soils of the United States, while the phosphorus content is somewhat greater. Without question the content of potassium, calcium, magnesium and other mineral elements, is sufficient for centuries of large crop yields.



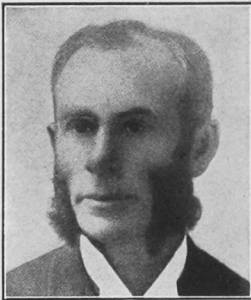
WAINWRIGHT, ALBERTA, WHEN IT WAS TWO YEARS OLD. TWO NEW TOWNS ARE STARTED IN WESTERN CANADA EVERY WEEK.

Farming along the Grand Trunk Pacific

By Professor THOMAS SHAW

Staff contributor to the "Orange Judd Farmer" publications. Member of the faculty of the Minnesota Experimental Station and Agricultural College. Author of standard text books on "Wheat" and an acknowledged authority in agriculture. Formerly professor at the Ontario Agricultural College.

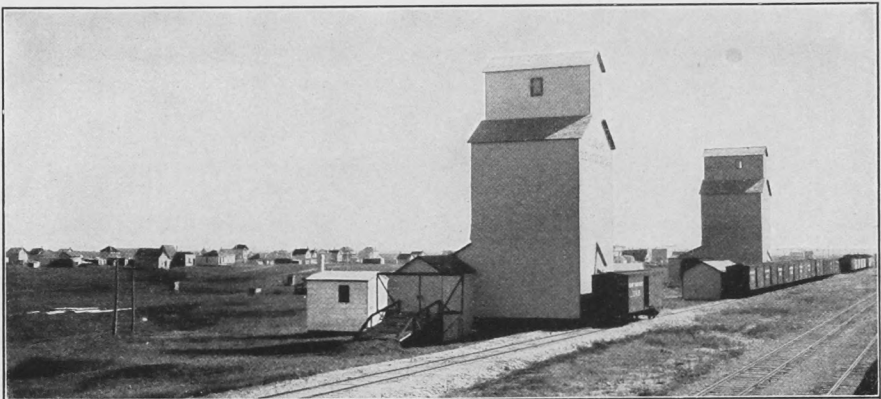
The Grand Trunk Pacific is virtually a continuation of the great transcontinental line which extends from Halifax on the Atlantic to Winnipeg. Beginning, therefore, at Winnipeg, it bears a little to the north of west to Edmonton, which it has already entered. From Edmonton it will extend to the north and west until it reaches Prince Rupert on the Pacific. From Winnipeg to Edmonton is 793 miles. It is of the soil and agricultural conditions along this part of the road that this paper will treat.



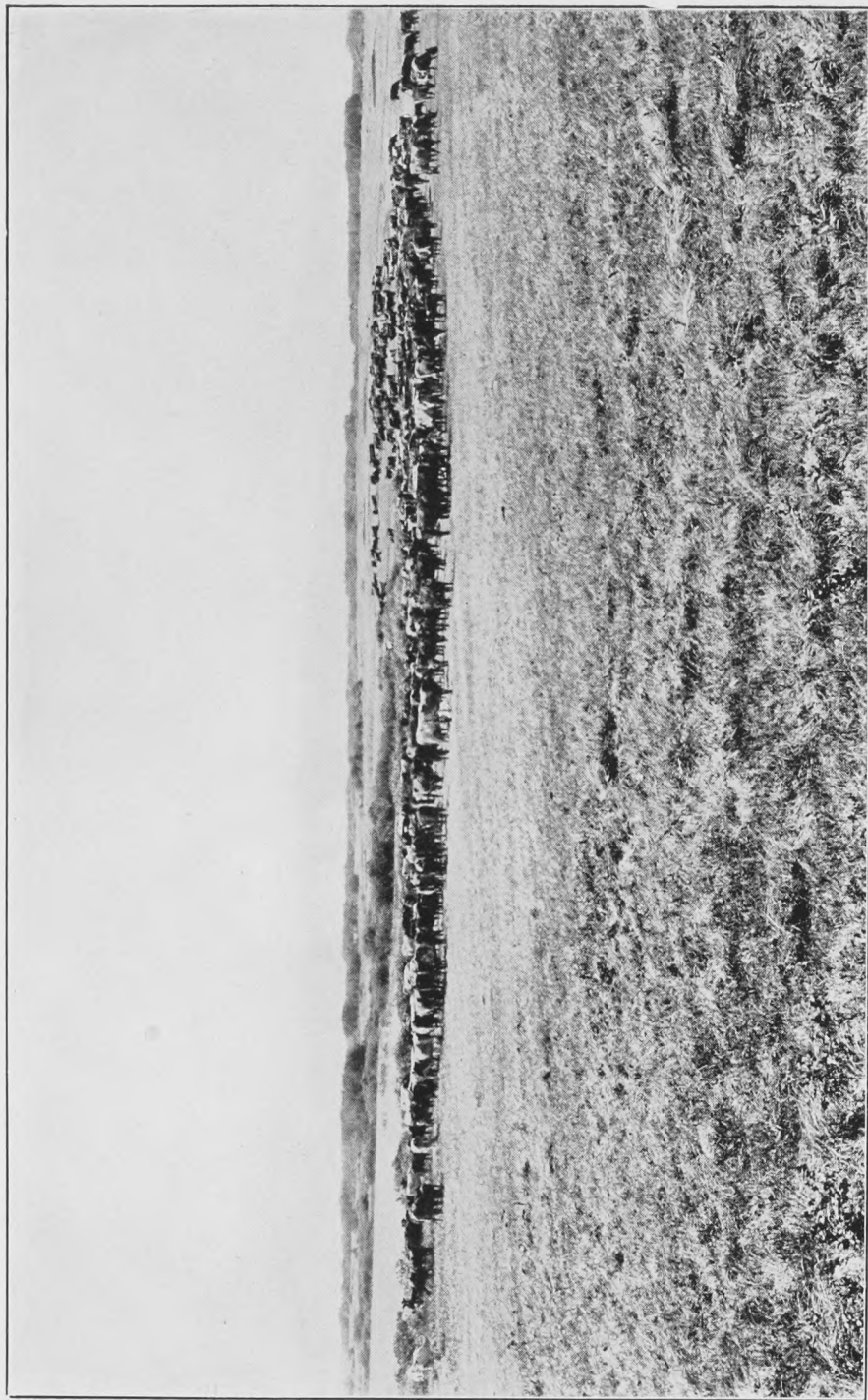
PROF. THOMAS SHAW

In addition to the homestead lands, are millions and millions of acres that are held by companies and individuals, but now thrown upon the market awaiting purchasers. In some instances these lands are superior in character to some of the homestead lands, but in other instances that is not true of them. Of course, those who bought them thought them better or they would not have purchased them on speculation, but in this

matter their judgment was not always correct. For instance, in some instances they bought land on the comparatively level prairie, destitute of trees, in preference to adjacent lands that were more or less broken and more or less covered with trees, when the latter were possessed of a richer soil and were also better adapted than the former to mixed farming. The individual, therefore, who is seeking a homestead must not hastily conclude that because a farm is open to entry, it is inferior in soil and general adaptation to other farms in the vicinity that can only be obtained by purchase. But, of course, it is true that some farms open to home-



Elevators at Rivers, Manitoba. First Divisional Point west of Winnipeg on the Grand Trunk Pacific Railway.



CATTLE RANCHING IN SASKATCHEWAN, NEAR PUNNICHY



On the Way to the Elevators in Saskatchewan.

steads are inferior because of some defect of physical conformation, as for instance the presence of numerous pot-holes or undulations too violent for easy farming.

It would be no exaggeration to say that practically all the land along the entire distance traversed by this road is capable of furnishing homes to those who till them. The lands are of three classes. They may be classed, first, as having special adaptation to the production of grain; second, as having such adaptation to mixed farming of which live stock will form an important feature; and third, as being mainly adapted to the production of live stock only. Of the third class of lands the area is not very large; of the second it is much larger; and of the first it is by far the largest. Of course, the land that has high adaptation to the growing of grain may be made to have equally high adaptation to the growing of live stock, according to the way that it is farmed.

For a distance of 20 miles, or about that distance from Edmonton going eastward, the road runs through an area capable of immense production. The soil, largely humus in its composition, is so rich that in some instances the grain lodges on it more or less in moist seasons even after years of tillage. Good crops of both winter and spring wheat may be grown upon it. The yield of 100 bushels of oats per acre and 60 of barley is by no means uncommon. This region has the further advantage of being possessed of high adaptation for mixed farming because of the great luxuriance of the grasses, native and cultivated, which it will produce, because of the exceeding size of the roots and the very large yield of the same, and because of the abundance of the protection furnished by the trees which grow on every hand. These lands run all the way from \$12 to say \$30 per acre, according to their distance from Edmonton and from the railway. This area will eventually become a live stock producing country of the first order, and when that time comes the land will readily bring \$100 per acre.

Then follows the Beaver Hills country, which begins at Ardrossan and extends

to Tofield, a distance of 23 miles. This area is rolling and more or less broken. It has much good land within it, but its value is somewhat discounted by the presence of an occasional muskeg. It is essentially a country in which mixed farming will be conducted, giving live stock the lead. Beaver Lake, north from the railway, is $12\frac{1}{2}$ miles long and 6 miles broad.

From Tofield to Wainwright is 87 miles. The country is variable; much of it is brush land. Some is open prairie. Again, there is park land. It is a country for mixed farming in which prominence should be given to the live stock feature. A large proportion of the land is open to entry.

At Wainwright is the Buffalo Park recently established by the Dominion Government at a cost not far short of a million dollars. In this park all the buffaloes owned by the government are gathered and number more than twelve hundred. One corner of the park is only one mile from Wainwright. There is also much good land about Wainwright which is capable of high production. Some is open to entry and some is held at moderate prices.

From Wainwright to Scott is 97 miles. Not a little of the land in proximity to the railroad is sandy and hilly, being the border of the second prairie steppe. It is brush and tree land and pasture land as well, and has in it many ponds and small lakes. It is adapted only to the growing of live stock. But some distance back from the railroad and beyond the sandy land are wide stretches of good grain lands.

Scott is 224 miles east of Edmonton and 569 west from Winnipeg. For many miles east from Scott and also west along the line of the road and for 30 to 40 miles northward and 100 miles southward is one of the smoothest and most uniform stretches of prairie land to be found in the Canadian West. It is almost entirely free from pot-holes, and yet it is sufficiently undulating to drain well. The soil, a dark brown in color, has in it considerable clay and some sand. It is a soil that will stand cropping for a long term of years. The subsoil, a clay of medium open texture, is admirably adapted to the passage of water downward or upward as it may be needed, owing to the presence or absence of moisture. This land will produce fine crops of wheat, oats, barley, flax and speltz with much certainty, as was attested by the crops of these growing on the land, and good



Turnips weighing from 15 to 20 pounds are common in the fertile valleys of Central British Columbia; in fact, all roots grow to perfection, and the quality cannot be beaten anywhere on the continent.

Grand Trunk Pacific Railway

crops of winter wheat can certainly be grown upon it. It will grow abundantly all kinds of field roots and also potatoes. It has also marked adaptation for field peas and it will undoubtedly grow clover and alfalfa in due time, also timothy, western rye grass and brome-grass. Much of the land has already been taken by homestead or by purchase. Back from the railroad several miles excellent land may be obtained for \$16 to \$18 an acre.

From Watrous to Melville is 129 miles. This part of the road runs through the Touchwood Hills. These hills extend for 20 or 30 miles on both sides of the railway.

The soil on these hills and in the valleys is most excellent. It is black to brown in color and is underlaid with a subsoil of permeable clay. As the lakes are numerous, this region has pre-eminent adaptation to mixed farming giving much



The Capability in Production of other things than Cereals is illustrated in this Picture.

prominence to live stock. The adaptation for growing coarse grains and grasses, also field roots on which to feed them, is of the best. It is questionable if better land for growing alfalfa and the clovers can be found in the Northwest, and yet there is comparatively little settlement. The region has been shunned by the settlers, notwithstanding its picturesque beauty and the kindness of the soil, because of the labor that would be involved in clearing away the poplar groves. The protection for live stock is of the best. This land can be purchased for about \$12 per acre and the men who make homes on it may look for a rich reward.

Melville is 279 miles west of Winnipeg. This four years' town with 3,000 inhabitants is located in a rich and slightly undulating country. Already the dwellings of this town of gourd-like growth are scattered over a mile of area. Melville is a division point on the railway. The drive into the country around revealed a soil of loam, strongly reinforced by an ample supply of humus and underlaid with more or less of a chocolate subsoil rich in lime and probably more or less marly in character. Here, as in other parts of similar soil, the filling of



IN THE RESIDENTIAL DISTRICT OF A WESTERN CANADIAN CITY

Grand Trunk Pacific Railway

the grain is superb, as witnessed in the triple-grained top kernels of the oat-heads, which is an indication of superlative adaptation to perfect filling of the grain. This splendid soil extends far to the east and west and north and south of this centrally located town, whose future development is assured. The farming land is worth \$18 to \$30 per acre.

Rivers, the first division point of the railway west of Winnipeg, is 142 miles therefrom and 137 miles east of Melville. This portion of the road runs through the valley of the Assiniboin. It enters the same from the west near Victor and emerges therefrom not far from Rea, a distance of about 30 miles. The scenic beauties of this portion of the road are probably not excelled in the Canadian West east of the Rocky Mountains. The valley is wide, not less, probably, than one to two miles. The wooded banks are high and slope with more or less abruptness. The pastures and farm steadings and fields of ripening grain blend with the green groves and brushwood of the landscape in a harmony that soothes and pleases the vision. This valley land should furnish an ideal soil for growing alfalfa, as it will be possessed of a subterranean irrigation. Beyond the banks to the north and south fine farming lands abound.

Emerging from the valley, the road runs through a region that has been settled for more than twenty years. The good crops that still grow upon it abundantly attest the great wearing power of the dark loam soil. The comfortable and commodious dwellings sheltered by the poplar groves around them bear silent but eloquent testimony with reference to the character of the homes that will soon be found throughout this country in all its borders.

Rivers is a town of 800 people and it is built on a gravel plain which has a diameter of four to six miles. A drive out into the country revealed a region with the same dark free-working loam that characterizes all areas in which clumps of poplar and willow trees abound. The crops were good, but showed some signs of wear in the land. How can it be otherwise, since the crops of grain grown on it for more than twenty years have been sold and the straw that produced them has gone up in flame and smoke? Still going eastward, the rich Portage plains are crossed and finally Winnipeg is reached.

While excellent crops of grain may be grown on nearly all the land from Winnipeg to Edmonton, a distance of 793 miles, the larger portion of it has high adaptation for mixed farming, of which live stock will form a prominent feature as soon as the farmers adopt more sane methods of taking care of the land.

As soon as mixed farming of the character mentioned shall be generally adopted, lands that may now be obtained for from \$8 to \$18 per acre, and even lands now open to homestead, will sell for \$50 to \$100 per acre.

The statement thus made is not extravagant. It cannot be otherwise. In natural fertility these lands fully equal those of the American corn belt. In variety of production they excel them, and yet the latter sell for \$100 to \$200 per acre. In addition to the grain crops now grown of wheat, oats, barley, rye, winter and spring wheat, and speltz, much of the land will grow Winter wheat when properly grown. Eighty per cent of them will grow clover and alfalfa. A still larger percentage will grow field peas, and the entire tillable area will grow good crops of the cultivated grasses, timothy, brome-grass and Western rye grass. Why should not this entire area become a region of happy and prosperous homes?

Why I Emigrated

By *WALTER NOBLE BURNS*

Editor Sunday "Inter-Ocean," Chicago. Mr. Burns was for five years on the staff of the "Louisville Evening Post" and also held important editorial positions on the "San Francisco Examiner" and the "Denver Republican." He has been connected with Chicago newspapers for ten years.

"Why did you emigrate from the United States?" I asked a farmer in Western Canada.



WALTER NOBLE BURNS

"I believed Western Canada was a land of opportunity for a poor man," the farmer answered. "I have found it a poor man's paradise."

The farmer was a pioneer. Five years before he had trekked across country from Iowa. He had settled upon a virgin prairie. Now he was the owner of a landed estate which spread out before me in league upon league of billowing wheat. His stalwart, bronzed figure had for impressive background his farm itself, visible embodiment of his labor and achievement—a fine two-story farm house, a great barn in the midst of a small village of granaries and outhouses, an orchard weighted with fruit; horses, cattle, sheep and hogs in the pastures, and on all sides to the horizon wheat, nothing but wheat.

"I farmed on rented land in Iowa," the farmer continued. "I rented because, with land at \$100 an acre, I could not buy. I managed to make a living on my rented acres—that was all. Some years were good, some bad, but in general, it was a hard fight to keep the wolf from the door. I was putting nothing by for a rainy day. Old age seemed likely to catch me still penniless, still struggling. My death would have meant poverty for wife and children."

"I determined to strike for the Canadian frontier where I at least could fight out the battle on land of my own. I came overland behind a mule team. All I owned on earth was in the prairie schooner with my wife and babies. I homesteaded 160 acres. I added to my original purchase from time to time until I now have 3,000 acres. There is no mortgage on any part of it. I owe no man a cent. For some of my land I paid \$2 an acre, for some \$10. I would not sell it for \$50."

"Do you mean to say," I cut in, "that you have paid for all your land in five years?"

"In much less time," said the farmer. "Some of my land paid for itself with the first crop. None of it took longer than three years to pay for itself. If there is any doubt at the back of your brain that land in Western Canada will pay for itself in three years, it is easily proved. One hundred and sixty acres bought, say, at \$15 an acre, costs \$2,400. Farm machinery, seed grain, cultivation and harvesting the crop may cost \$10 an acre. Say the farmer plants his farm in wheat for three successive years. Say the yield is twenty bushels to the acre. Say, conservatively, he sells his wheat at 75 cents a bushel. Then his crop brings \$15 an acre. Subtract \$10 an acre for expenses and there is left a profit of \$5 an acre a year. For 160 acres that is \$800 a year or \$2,400 in three years—the cost of the farm."

Grand Trunk Pacific Railway

"But with good luck land will pay for itself in a single crop. Thirty-five bushels of wheat to the acre will more than pay for \$15 land in one crop. In some years my land has averaged more than that. You can figure it out for yourself."

"Would you prefer a farm in Iowa?" I asked.

"I am not going back," replied the farmer. "Very few settlers from the States ever go back. A 160-acre farm in Iowa at \$100 an acre costs \$16,000. A 160-acre farm in Western Canada at \$15 an acre costs \$2,400. For the money it takes to buy a 160-acre farm in Iowa, a farm of 1,000 acres can be bought in Western Canada. If the wheat yield in Iowa is fifteen bushels to the acre, the 160-acre farm will produce 2,400 bushels which, at 80 cents a bushel, will sell for \$1,920. If the Canadian farm of 1,000 acres yields thirty bushels to the acre, the crop will be 30,000 bushels, which, at 80 cents, will bring \$24,000. I have money enough to buy a farm in Iowa now if I cared to. But there my yearly returns would be meagre. Here my yearly returns are large. There I should be a small farmer. Here I am a landed proprietor."

In a corner of the farmer's yard as we talked I noticed a mound overgrown with weeds and wild flowers.

"What is that?" I asked.

"That," said the farmer, "is the ruins of the sod shanty that I called home when I first settled here five years ago."

I plucked a wild aster from the ruins and tossed it into the air. The blossom described a purple parabola and struck against the farmer's splendid modern residence. What a contrast was there between the hut of yesterday and the palace of today! In the eloquent antithesis was evidence of the wonderful possibilities of this new land—amazing, tangible, incontrovertible proof that a poor immigrant settling upon a raw prairie had become in five years a substantial and wealthy citizen with a beautiful home and a magnificent estate as the result of his own energy and labor. No need for the farmer to say more. Why did he emigrate? Why, indeed? Here was the answer before my eyes.



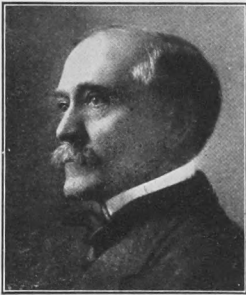
Grain Fed Steers.

The Future of the Hog Industry in the Grand Trunk Pacific Country

By SAM McKELVIE

President and principal owner of "The Nebraska Farmer." Instructor at the Nebraska State College. Mr. McKelvie has had twenty-five years' experience in breeding and raising hogs for the market and showyard, and is a practical farmer on a large scale.

In a recent trip through Western Canada along the lines of the Grand Trunk Pacific I saw thousands of acres of good farm lands, whose quality was evidenced by the looks of the soil and the appearance of the splendid grain crops then ripening for the harvester. At Saskatoon, for example, I saw many beautiful stands of all varieties of wheat, oats, barley and other grains. Spring wheat was over four feet high, as thick as it could well stand, was not lodged, and was the best I have ever seen grow. In fact spring grains are grown in quantity and quality not excelled anywhere, and the thing that impressed me most in my trip through the country was the fact that the Western Canadian farmers were losing a great amount of money by not raising more live stock as well, and especially hogs.



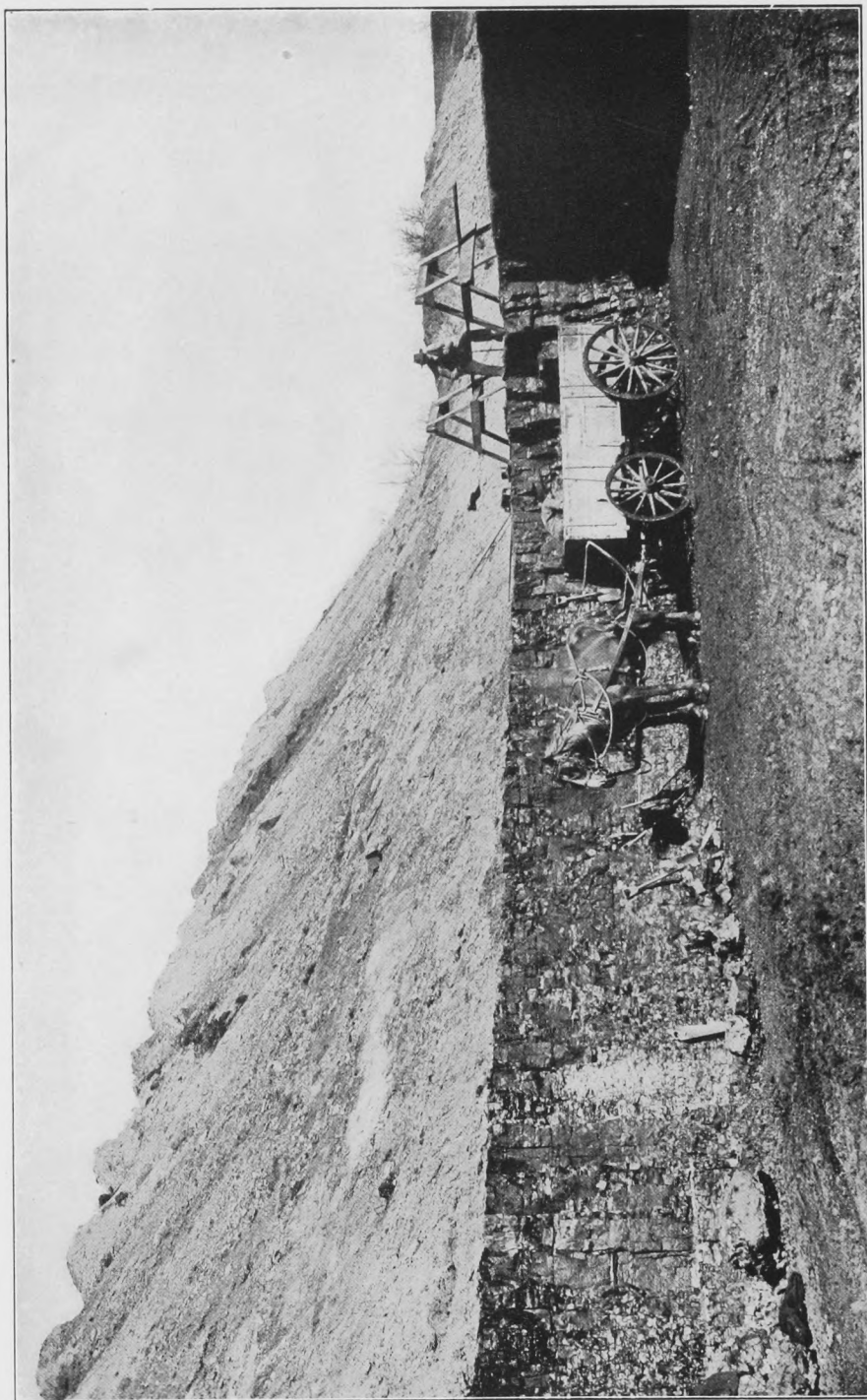
SAM MCKELVIE

They have the feed, for, contrary to a common notion, corn is not necessary for hog-raising; only a small outlay is required to start hog-raising; and the animals increase rapidly, grow quickly, and are soon turned into

money. For these very good principal reasons, they are the more desirable for the newcomer in a country that is just opening up.

It has been the history of all new prairie countries that the earlier settlers confined their efforts to growing spring grains, especially spring wheat. This was true in the pioneer days of Nebraska, Illinois and Iowa, thirty years ago. We first grew spring wheat, agreeing to pay all bills after threshing time. This is like spending your money before pay day. The wise farmer, however, soon changed his methods and commenced growing hogs, and other live stock. While it is true that the Canadian farmer grows more and better grain than we Nebraskans did, and while it is also true that we learned later to grow corn as the handiest and best finishing-feed for the fat-back, or lard hog, yet it is equally true that in spite of his lack of corn, the Canadian farmer can and does grow hogs at a good profit. In fact, in my opinion, coupled with a quarter of a century's experience in growing hogs for both market and show-yard, he cannot afford to carry on his farm operations without them.

Universally through the corn belt country it is recognized that corn cannot be fed profitably as an exclusive ration for swine, but is used mainly in finishing the lard-hog for market. In the pig's growing days, a balanced ration such as can be furnished or produced on the Canadian farm in abundance, is best for his health as well as for his bone and muscle development. In fact, the Canadian farmer can use the hog almost every year in a profitable way as a scavenger, conserving the waste of his farm by consuming and turning into money any bad-colored barley, shrivelled or frost-bitten wheat, should he have any, unmarketable



SEAM OF COAL (TEN FEET) WAINWRIGHT DISTRICT

flax, and so forth. He will be surprised, if he keep account carefully, to find that his unmarketable stuff combined with good grain will, through the hog, actually net him more than his good grain.

Canadian farmers are rapidly becoming aware of this fact, and Canadian pea-fed and alfalfa-fed bacon is making a name for itself with the packers. The price of pork along the Grand Trunk Pacific has not been below \$4.25 per hundred during the past six years and has run as high as \$7.00. Wheat converted into pork at \$4.25 per hundred would realize sixty cents per bushel, and supplemented with alfalfa, rape or tare pasture in summer and roots in winter, the number of pounds of grain required to produce one hundred pounds of pork can be greatly reduced and the value per bushel realized correspondingly increased. Alfalfa is being successfully grown in Canada, and is a soil builder as well as a hog feed, thus giving a double value. The excellent Canadian field peas and rape are also very good crops, and with these feeds at hand the Canadian farmer can produce a quality of pork that will command the highest prices in the world's market, and double and treble his lands in value as the call for Canadian pork becomes greater.

Large packing plants are in operation on the Grand Trunk Pacific with capacity to use much more than the present rapidly growing supply and the local markets must still import a very large proportion of their provisions from sources outside the country.



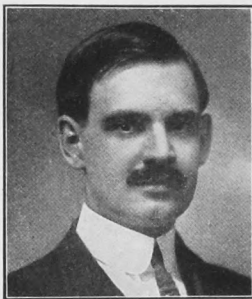
The Pride of the Saskatchewan Farmer.

Community Life along the Grand Trunk Pacific System

By *ERNEST CAWCROFT*

New York magazine writer on legal and economic subjects. Has visited several parts of the world on commission from various publications to obtain original data on these subjects.

The Grand Trunk Pacific is the latest racial trek. The engineers of the National Transcontinental are racing Goethals of Culebra Cut to the Pacific. Whether King Canuck gets to Prince Rupert before Uncle Sam reaches La Boca is the world's continuing speculation. During the progress of the work on both projects it is interesting to observe the effect of these constructive organizations on the communities created or enlivened by such enterprises. Just as the efficiency of Uncle Sam is reflected in the organization of the villages of canal workers adjacent to the Panama Canal, so the method and rapidity with which the Grand Trunk Pacific is undergoing construction is making an impression on the communities adjoining this railway system.



ERNEST CAWCROFT

The Grand Trunk Pacific, unlike the first railway which crossed the continent of North America, has no land grant to sell; but the officials responsible for the operation of this semi-public railway in which the whole Canadian nation has a share have a definite interest in carrying the largest number of settlers to those fertile wheat lands adjoining the system, which will produce the greatest return cargo. It is not a matter for wonderment, then, that the railway is cooperating with the people of the communities along the line in getting these towns started right. The corporation is interested not only in founding the town as a point of possible tonnage, but it is concerned with the government and development of the community. This does not mean that the corporation is to patronize the town in Pullman-like fashion; but it does imply that the system shares with the early settlers an interest in the creation of a modernized community. A visitor to the communities of the Grand Trunk Pacific System is impressed by the determination of the pioneers to prevent vested interests from securing sites or franchises which will retard the proper development of the place. This they have determined to prevent—this they are succeeding in forestalling and the visitor to these communities is pleased with the original effort to lay out the town on a definite engineering plan which will assure the development of the sanitary and business districts in a manner assuring the greater good to the greatest number.

Private capital will not be invited to lay water mains and electric wires to supply the little community and then be subjected to a radical attack for the purpose of driving it from the place; but the people of these communities are doing the just thing not only to private capital but to themselves by announcing their determination to construct and operate public utility plants.

Nor is this plan ill advised from the standpoint of the other business interests of these towns. Many cities of the United States have been retarded in their development because the civic attack on the interests of public corporations made

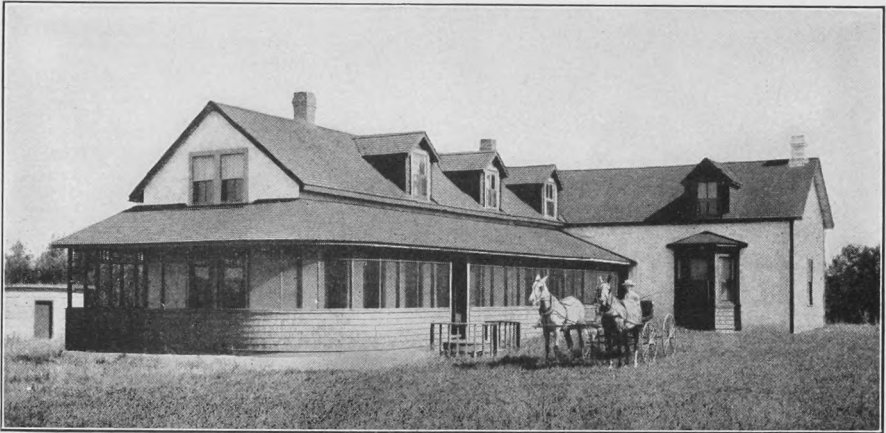


A GALA DAY IN WINNIPEG

Grand Trunk Pacific Railway

other capitalists loath to invest. But the retention of these franchise privileges by the people of these towns means that the element of private profit in public affairs, which is the motive power of city corruption in the United States, will be eliminated in advance; and in addition, the removal of these interests from the realm of discussion will forestall the coming of the demagogues who grow strong with the people in proportion to the vigor of his attack on private capital.

But the business phases of this determination of these communities to own their utilities, should not be overlooked. While the burden of municipal taxation is provocative of continual groans throughout the United States, many of the cities of Western Canada, like Regina, Edmonton and Prince Rupert, enjoy a maximum of public improvement at a minimum of expense to the taxpayers because these towns reap a profit from the operation of some or all of their public utilities. The day is just at hand when these towns of the Grand Trunk Pacific System will want manufacturing establishments to create those textiles and implements exchangeable for the wheat and oats; and when it is possible by this policy to display an extensive civic activity at a small cost to the taxpayer, the work of inducing



A Rancher's Headquarters near Punnichy, Saskatchewan.

manufacturers to locate in these towns will be materially lessened. And when these manufacturers locate in these communities, the freedom from burdensome municipal taxation will be a factor in their triumph when they enter the competitive markets of the continent.

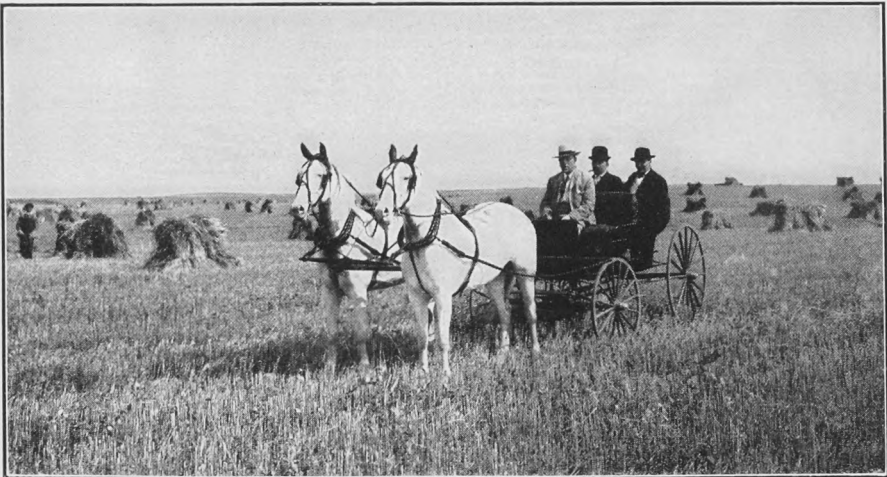
The towns of the Grand Trunk Pacific System are not of the wild and woolly west variety. The law is provided for them from the outset of settlement. Under the statutes of the several Provinces, a uniform incorporation is provided for town sites, and this assures the orderly administration of affairs from the start. Once the little village is organized under this uniform act, the growing community has a right to seek a village or city charter from the provincial officials.

Some one has pointed out that the Puritans on landing first built a shack, then a school house and finally a church. A town site along the Grand Trunk Pacific first gets a depot, followed by a hotel, a chain of elevators, then private dwellings, a school on land reserved by the Government and later a church or two. A shack may have satisfied a settler who came over in the Mayflower, but the colonizers who arrive by Pullman are in need of a hotel. It is the determined policy of the Dominion Government to reserve land in every township throughout

the West for school purposes. One of the features which invariably provokes comment from the observer, is the large number of school houses throughout the country. For any district where there are six or more children may have a school, while in the towns, even in those a year old, the \$20,000 to \$40,000 school house is the pride of the place. A glance at the missionary appeals appearing in the columns of the "London Weekly Times" will convince anyone of the Empire's wide interest in the maintenance of churches in Western Canada. Indeed, they are starting things right in the towns of this railway system.

But the get-together spirit is the marked feature of community life along the Grand Trunk Pacific System. These pioneers unwittingly realize that they are starting a new deal in the dying days of individualism. Hence they are bent upon doing things by cooperation whenever those things can thus be done better than by individual effort. The lodges flourish; they are social centers of these towns and everyone joins. These towns are owning municipal skating rinks, while the lawyers of New York are speculating as to whether the people of their towns have a right to operate this or that public utility. Not to have a board of trade marks any one of these towns as a dead one. The board is the civic betterment, town promotion and public reception committee combined. It makes a business of telling the town aldermen what to do. The best men can air their plans at the board meeting without having to go to the trouble of getting elected. Every town along the Grand Trunk Pacific is getting things done for the whole community through its board of trade at a maximum of results with a minimum of red tape. When acres of wheat surround the towns, yielding thirty to forty-five bushels per, the impendency of the reaping time stimulates a faith in doing large things for "our town" without putting fat and aged gentlemen on the committee to both delay the project and give it respectability. The towns along the Grand Trunk Pacific afford large opportunities for the virile type of young men who know what they want to do and how to do it.

"All aboard for Canora, Saskatoon, Edmonton and Prince Rupert" is the next cry to appeal to the Wander-Lust.



A Wheat Field in Saskatchewan.

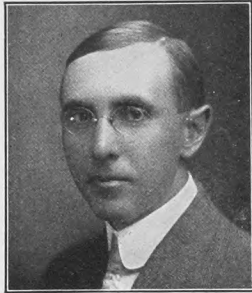


NEW SETTLERS IN SASKATCHEWAN

Mixed Farming along the Grand Trunk Pacific

By H. E. YOUNG

Editor of the "Farmers' Review," of Illinois. Graduate of Michigan Agricultural College; Director, Illinois Farmers' Institute, practical farmer and dairyman.



H. E. YOUNG

The glistening rails of the Grand Trunk Pacific in Western Canada pierce an agricultural territory of unbounded fertility. Nowhere are found more productive and profitable farming lands. The soil is black and deep. The growing season presents a succession of long sun-shining days and is blessed with ample showers—a happy combination bound to make and mature crops to perfection. Transportation facilities over the Grand Trunk Pacific lines are all that can be desired. And what more can a farmer ask?

Western Canada is not, emphatically not, what some of our earlier historians would seem to have us believe—a land of ice and snow, inhabited by Eskimos and Indians interested only in trapping and hunting. It is neither a land of severe temperatures nor of aboriginal population. Far from it! It is a land of most agreeable seasons; a land dotted with intensely progressive, thriving towns and cities, and prosperous, profitable farms operated by intelligent, industrious, up-to-date citizens from the States, Eastern Canada and the agricultural sections of Europe.

Western Canada is to-day a great and rapidly growing country. It is an agricultural empire of almost unlimited and unbounded extent, capable of supplying enormous quantities of all food products. Its soil and seasons are admirably



H. W. Lindsay's collection of Vegetables, etc., at Saskatchewan Fair, Melville.

Grand Trunk Pacific Railway

adapted to agricultural production. The untold possibilities of the country insure its brilliant future. It is the last great west, and its development is bound to set apace unparalleled in the history of agricultural countries.

A study of agricultural conditions along the lines of the Grand Trunk Pacific reveals the fact that other crops than wheat are unquestionably not only possible but profitable. In soil and season, this entire section is admirably adapted to mixed farming operations. There is scarcely a crop known to a temperate climate that is not found growing luxuriantly in the Canadian west. Wheat may reign for a time, but heirs apparent are many. Other grain crops, oats, barley, rye, flax, and very likely Indian corn, will eventually share, if not usurp, the sovereignty. Clover, alfalfa, peas, vetches and other legumes are certain to find increasing favor on these rapidly developing western farms. Garden crops, including all varieties of table vegetables, small fruits, roots, etc., look equally good to the progressive farmer.

There is every reason that diversified cropping must figure largely in the future development of Western Canada. Such will be true not alone because of the splendid adaptability of the country, but because of the additional profits to be derived. In serving as a pioneer money crop, wheat is making good. It is enabling many farmers to pay for their farms quickly and easily. But no soil, no matter how fertile, can stand the strain or hide the evils of continuous grain cropping. Decreased yield and depleted fertility are bound to arrive sooner or later. Third-year summer following only aggravates the trouble, as no plant food is returned to the soil. Crop rotation offers the only relief and cure. And in connection it promises permanency and profit.



Farm Garden of Mr. J. C. Chadwick, near Edmonton, Alberta, on line of Grand Trunk Pacific Railway.

Nothing speaks so eloquently for a country as do actual crop yields. Measured by this standard, Western Canada presents the acme of success. The wonders of Canadian wheat production have been widely told. How about other crops? A personal investigation throughout the Grand Trunk Pacific territory gave the writer first-hand information. Oats, barley, rye and flax show tremendous yields. The annual harvest averages greatly exceed those of the States.

Alfalfa does exceedingly well in this much touted wheat territory. Yields of from three to four tons per acre are the rule where the crop has been well established. A forty-acre field of but two years' stand, examined August 18th, showed an average second growth of over two feet. The first crop was harvested the middle of June and made two tons per acre. A field of eight years standing presented equally good evidence of the possibilities of the crop. Other legumes do equally as well. It is only a question of proper attention from the farmer.

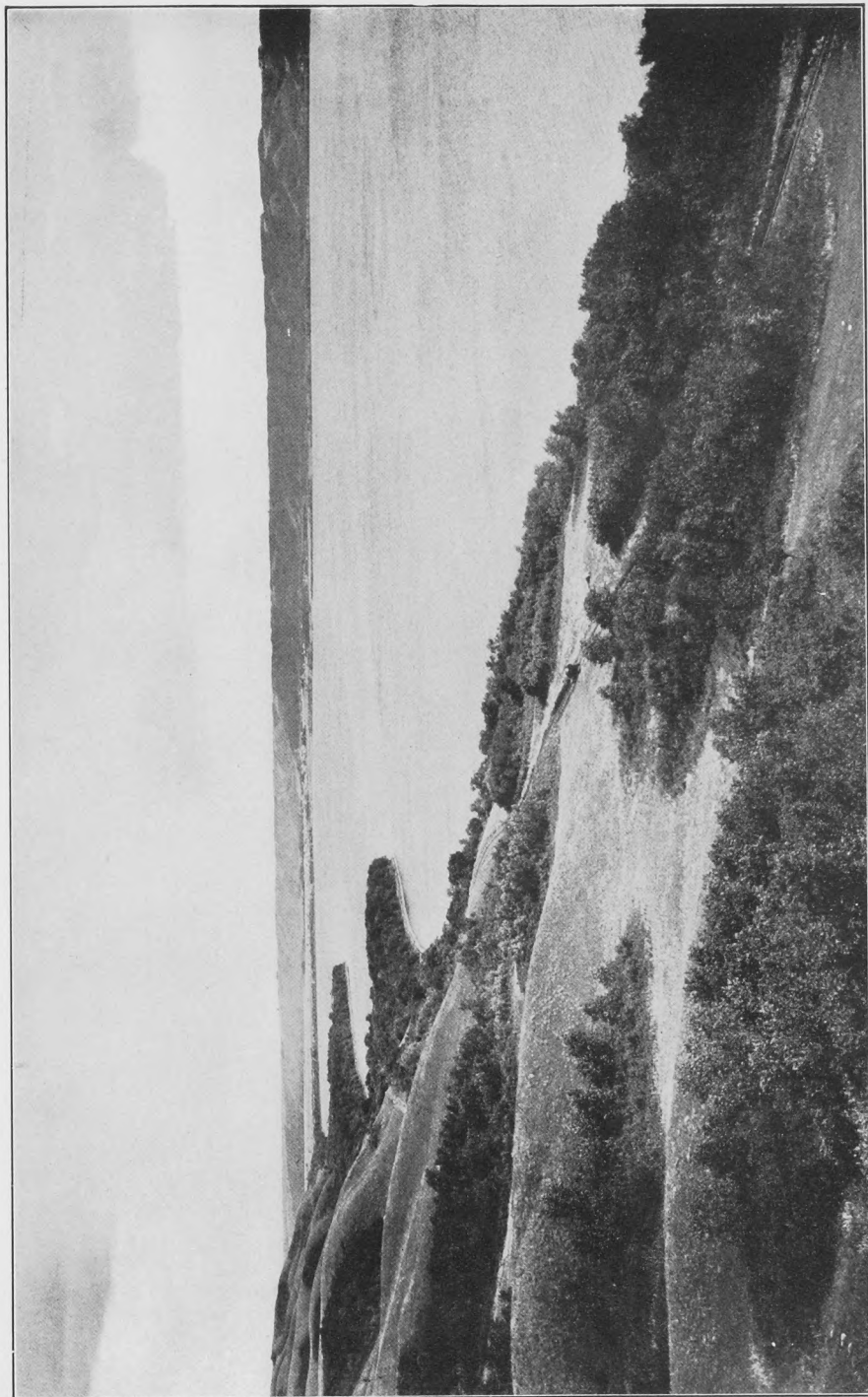
The farm gardens of Western Canada are sights good to behold. They contain a succession and a variety of vegetables capable of watering the mouth of the seasoned epicure. There are melons, strawberries, raspberries, blackberries, currants, gooseberries, grapes, lettuce, radishes, peas, beans, onions, cabbages, cauliflower, rhubarb, spinach, carrots, turnips, pumpkins, squash—all of most excellent quality. Better evidence of fertile soil and favorable season cannot be imagined. But as a rule these gardens supply only the domestic needs of the farmer. Demands for fresh vegetables in the cities and towns are large and constant. Prices are good but most of the supply received comes from a distance. The business of truck growing is a very remunerative one in Western Canada. Likewise it offers attractive inducements as a profitable side line to grain or livestock farming. Yields are sure and markets good.

The greater bulk of the potatoes consumed in the provinces are shipped in from afar. Here and there we find a farmer who has fitted this crop into a very satisfactory rotation, thereby beating former wheat returns to a frazzle. The average yield of potatoes in Saskatchewan, as reported by the government is 235 bushels to the acre. The average price to the grower ranges from thirty-five to forty cents per bushel, although frequently it is much higher. The striped potato beetle, so universally cursed in the States, has not yet made its debut into Canada.

Mixed farming is beginning to revolutionize farming methods in Western Canada. Conditions are ideal, for diversified cropping and live stock. Such a combination keeps farms rich and makes farmers richer. Diversity of farm crops means greater prosperity for this last great west. It promises a permanent agriculture with increased profits in this greatly favored agricultural section, evidently intended by the Creator as the unsurpassed garden spot of the Western Hemisphere.



3,500 Bushels of Wheat waiting for the Thresher, Saskatchewan.



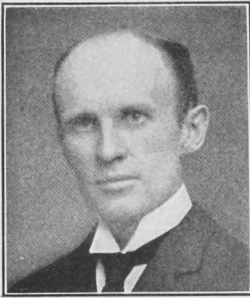
A FAVORITE RECREATION GROUND IN SASKATCHEWAN

Social Conditions along the Grand Trunk Pacific

By Professor E. E. FAVILLE

Editor "Western Farmer" of Spokane. Held chair of horticulture at Nova Scotia Agricultural College. Formerly professor, Agricultural Department Iowa State College, Ames, Iowa.

In the quest of cheap farm lands, the country pierced by the Grand Trunk Pacific in the Canadian West presents opportunities not to be excelled in any part of Canada. From Winnipeg to Edmonton, a distance of 793 miles, this splendidly equipped line of railway passes through fertile park lands, undulating prairies, through valleys, along the border of lakes and streams, bounded on every side by rich, fertile lands. Nowhere is there to be found arid or unsightly land on either side of this railroad.



PROF. E. E. FAVILLE

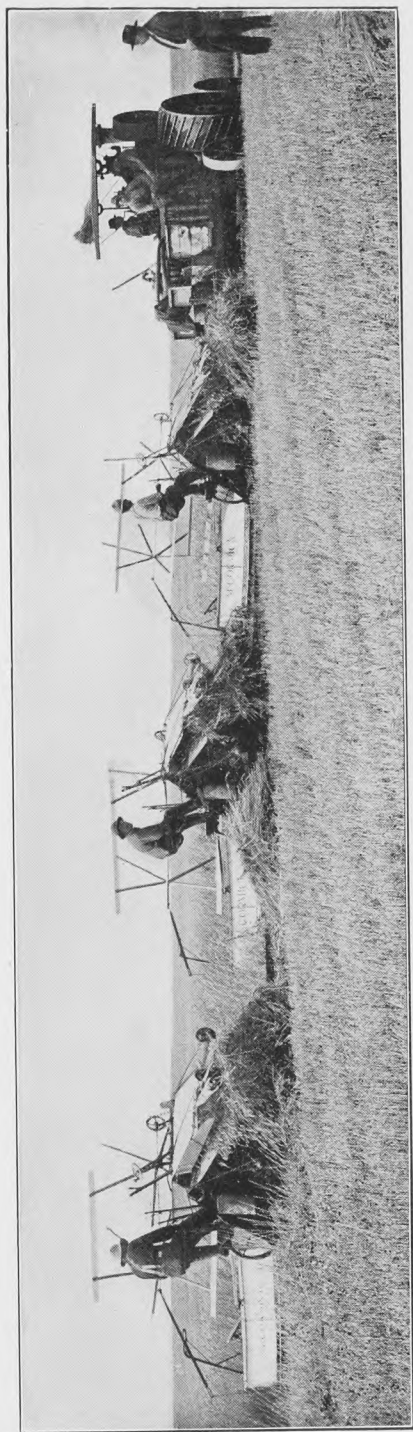
We speak of this section of Western Canada in terms of praise because we have found it to be one of the richest agricultural sections on the American continent. It was our opportunity to see and behold bountiful harvests being taken from newly made fields, and to peep into the homes of the new settler where content and wealth lie down at the door each night; to ride over vast areas of rich lands waiting for the hand of man to evolve them into productive acres, where

the door of opportunity swings open wider each year.

Social conditions in a new country are always looked upon askance by those who do not know or have yet to find out the truth. The time was not many years ago when the settler or prospective land buyer "trekked" into a new agricultural section in a "prairie schooner." To be a pioneer in those days meant to submit to hardships. Today, however, the seeker of a new home or of lands goes in a palace car, if you please, amid comfort and luxury. A striking contrast this of to-day and that of not long ago.

Home building is a part of empire building. It is the foundation of success in all agricultural districts. The content and comfort of the home life in Western Canada are of the highest and most satisfactory types. Isolation in this territory is a thing of the past. Good roads, telephones, improved machinery and the railroads bring the pioneer farmer close to the outside world. This fact is especially true in this newly favored section of which I write. All through this area of over 800 miles are to be found, dotted here and there, thrifty farmers, each adding his quota of success and participating in the prosperity of Western Canada's rapid development.

At different points here and there along the line of the Grand Trunk Pacific from the improved farming sections of Manitoba to the more sparsely settled districts in Alberta and Saskatchewan, prosperous towns have sprung up like magic. Within a year or more the population of these towns have increased with great rapidity. That their growth is a substantial one is attested by their many elevators and lumber yards, which bear testimony to the rapid settlement and development of the agricultural communities. The visitor for the first time is surprised



MODERN METHOD OF HARVESTING NEAR SOUTH SASKATOON, SASKATCHEWAN



THRESHING WHEAT WITH GASOLINE ENGINE, SASKATCHEWAN

at such a growth and such prosperity and wonders in a casual way if it will continue, but if he goes into the problem a little further he will find that the thriftiness of the new settlers and the productiveness of the soil are the chief causes.

But what of the social conditions of the more sparsely settled districts, in which are to be found homestead lands not yet taken? In these sections thousands of the best farmers of the States and Eastern Canada are settling and building homes. Most of these new settlers are farmers who have had experience in growing grain crops such as grow in Western Canada, or understand mixed farming as it should be carried on in a new country. Therefore, the new settler becomes at once a successful farmer. Organization is natural with him. He is essentially a home builder and is quick to avail himself of those methods of co-operation that bring the settlers of farm communities closer together in conducting affairs of mutual interest. It means something to be a farmer under such conditions, for agriculture is there in all its glory.

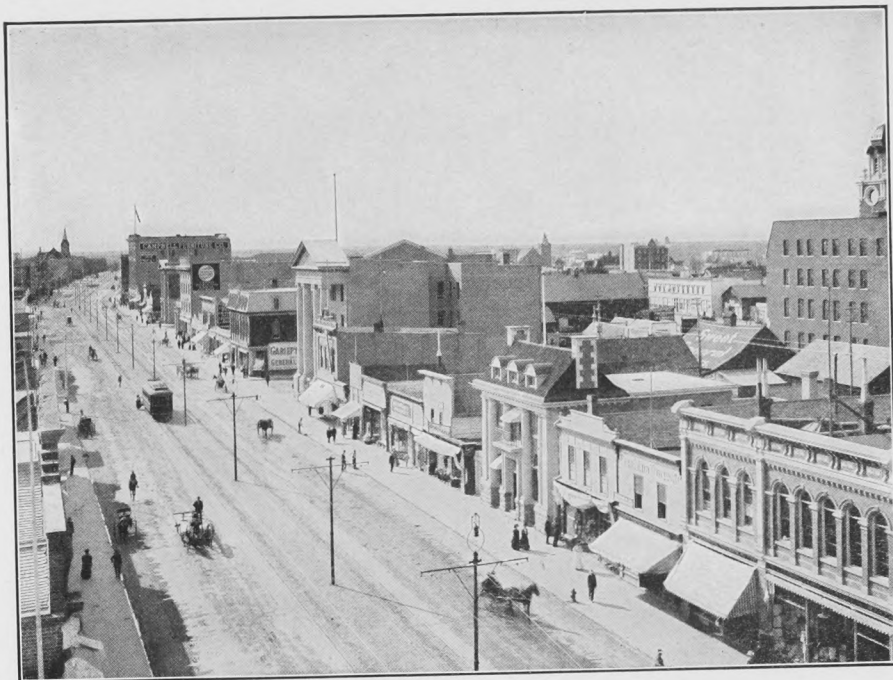
Liberty loving people have all the liberty the heart can desire under Canadian laws. The foundation of the social fabric of an agricultural country may be said to rest on the efficiency of its school system. In this regard Western Canada has a system of education based upon the best that can be obtained from the States and Eastern Canada. Its school system and regulations are second to none. Good high schools or graded schools are found in all the towns. "The little red school-house" is seen in all the organized districts. Any district, not to exceed five miles in length or breadth and having within that area four residents and twelve children, may be organized into a school district, a school-house built and teacher supplied. Thus every boy and girl has a school brought to his or her doorway.

The government is most liberal in its support of higher education. In Winnipeg, Saskatoon and Edmonton are to be found excellent colleges and universities, so that the problem of higher education is solved. The provincial agricultural



A Homestead near Edmonton, Alberta, showing the Old House and the New—The Evolution of Five Years.

Grand Trunk Pacific Railway



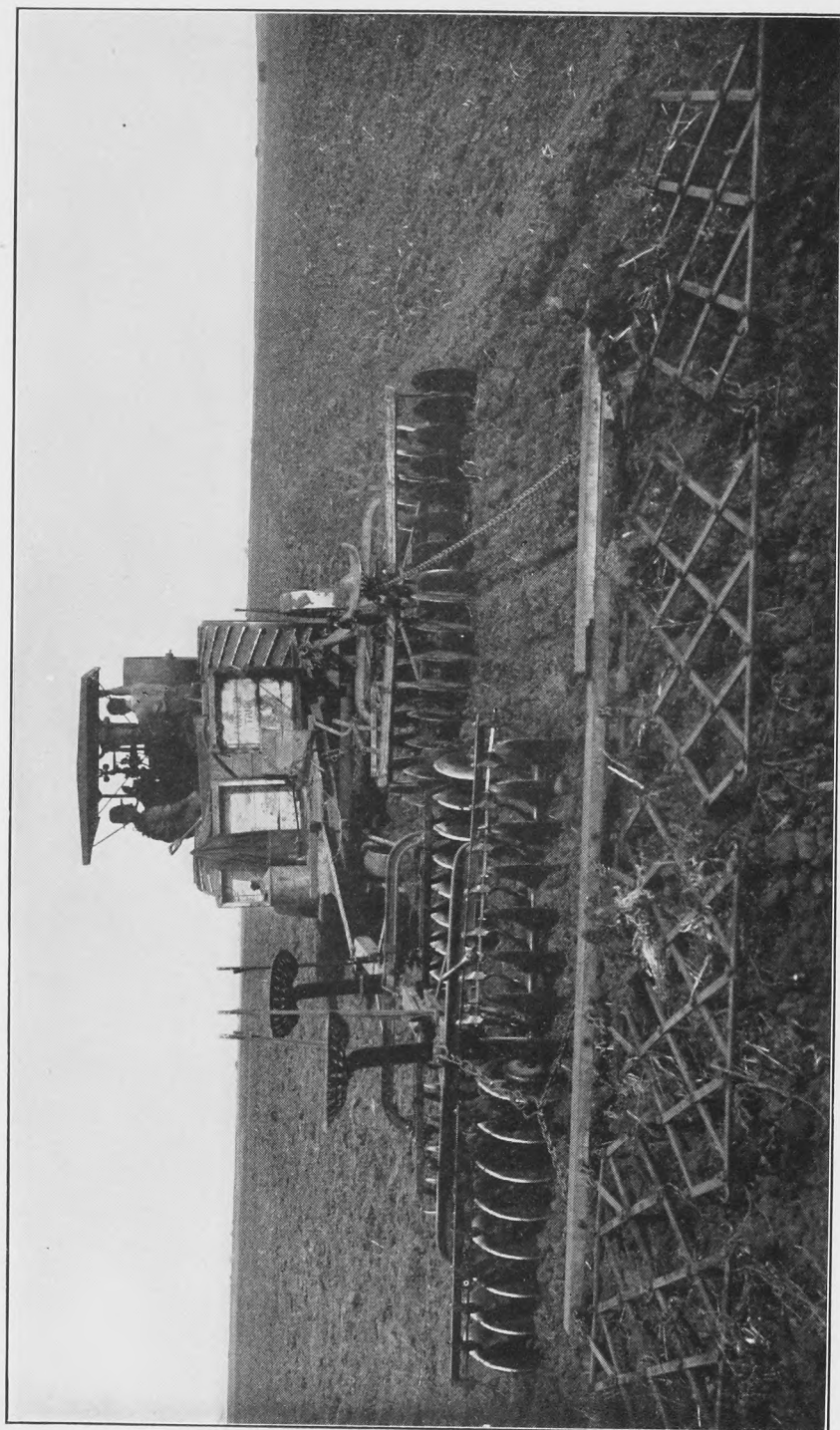
Jasper Avenue, Edmonton, Alberta, 1911.

schools located at Winnipeg and Saskatoon give practical courses in scientific farming, preparing graduates to take up the responsibilities of farm life. Fortunate are those farmers who locate along the line of railway that reaches these important institutions. Thus it will be seen that the question of higher education for the young folks is solved in the beginning.

Church organizations are numerous and there are few spots that can be found, even now, where they are not accessible.

One of the modern, practical and convenient inventions of the age is the telephone. This has been a great factor in lessening the labor on the farm and putting the country in touch with town and city. It is a factor that welds together agricultural communities into closer social contact. It may be noted here as in no other part of the American continent that the Provincial government lends substantial aid in the installing of telephone systems, so that new communities are not long without the aid of the telephone. The main telephone lines in the three provinces are all owned and operated by the government.

The newcomer settling in this favored section will find the social conditions far beyond a pioneer stage. He will find helps on every hand. Instead of his going to the "jumping off place," as is often supposed when thinking of Western Canada, he will find himself surrounded by wonderful opportunities for social advancement in a new country fraught with promise. He will find the social problems working themselves out quickly, and as the large farms become smaller and the population increases, better and better will become the social conditions of this new country. With an organization such as the Grand Trunk Pacific railroad behind the movement for the betterment of farm life, the future of the new settler in his relation to home life and social conditions is assured.



MODERN METHODS OF BREAKING THE LAND IN SASKATCHEWAN

Putting a Town on the Map

By WILLIAM J. SHANKS

Chief editorial writer for the "Chicago Examiner." He has been connected with various Chicago newspapers since 1888, specializing in municipal affairs, and conducting campaigns for municipal ownership of public utilities, investigating European municipal conditions and studying the evolution of communities.

We were coming back to the three-year-old town on the Grand Trunk Pacific's Winnipeg-Edmonton line, after a twenty-mile motor trip through surrounding wheat fields. Our chauffeur pointed ahead to the distant lines of buildings, the smoke from railway yards, the tall elevators, the church spires glistening in the afternoon sun.



WILLIAM J. SHANKS

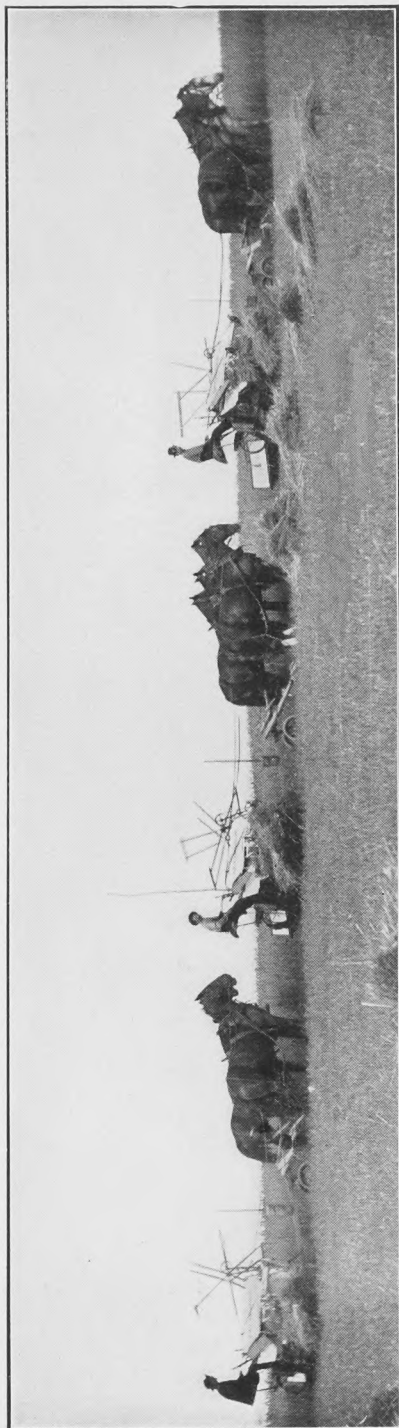
"Three years ago," he said, "there was no town—only the level prairie like we are going through now. When the townsite was placed on the market the people were waiting for it. It went with a rush, and though new towns are springing up on all sides, its growth is more rapid than ever. We are proud of our three-year-old."

At other points we were entertained in towns much less than three years old—in one less than a year old, with its Board of Trade, its leading hotel, its banks, stores, warehouses, and the ubiquitous elevator. These prairie towns seem to have no baby-hood. They scorn adolescence. The impressionist town-builders put their brush on the map, and the picture is complete. They will grow, of course, but in all the elements of solidity they are mature at birth.

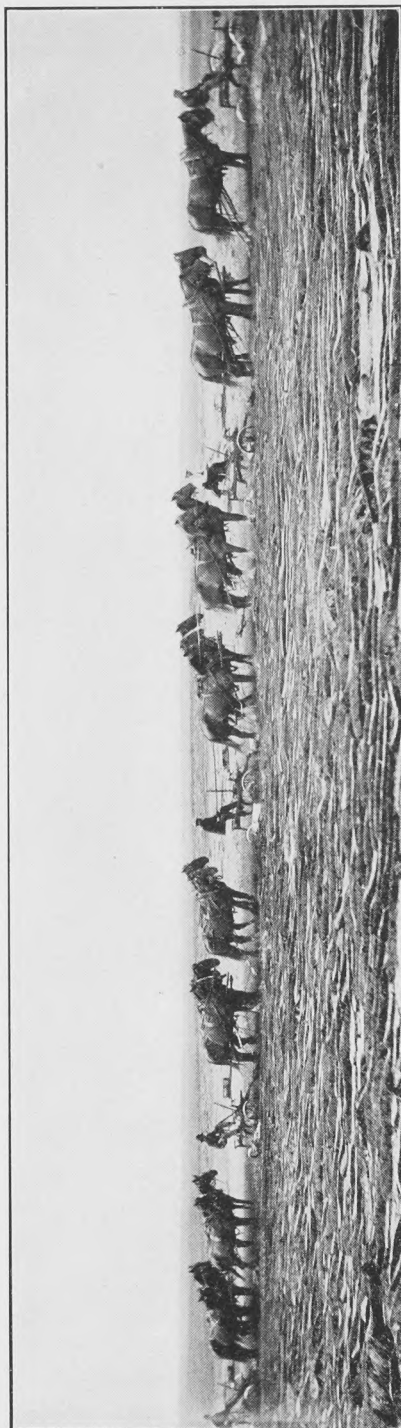
Ordinarily a village or town grows like a plant from the seed—by easy stages. In Western Canada, they are made to order. At the opening of one season, a slice of vacant prairie is taken for a townsite. Before the season's close there is an embryo city with business streets, stores, banks, a warehouse or two, a huge grain elevator. A new city has been born, full panoplied. Before it is a week old, it has its newspaper, and foundations are being dug for a school, a church and a town hall. At the season's end it is no longer a pioneer community. There are still newer ones on the heels of the railway builders.

There is nothing haphazard about locating or building these new towns. The best sites are chosen by a process of natural selection. They are far enough apart to give each its own constituency of farming districts. They are selected for their adaptability in soil and natural drainage, for the needs of a future healthy and prosperous community. The sites are laid out with scientific precision. Business sections, residence sections, are defined. Lots are sold to real city builders rather than speculators. The transformation goes on with a rush. Real estate values keep pace with improvements. The urban machinery is soon running without friction. Every newcomer catches the spirit of progress.

One statistical genius has figured out that new railways are being built, in Western Canada, at an average rate of three miles per day. Towns follow. By actual count, 127 towns have been launched in one season. They are not all large cities, but they are far enough apart to be necessities for their tributary soil-



HARVESTING WHEAT NEAR MELVILLE, SASKATCHEWAN



BREAKING THE PRAIRIE NEAR MELVILLE, SASKATCHEWAN

Grand Trunk Pacific Railway

tillers. As settlers pour into the vacant lands, and new farming districts are opened up, the new towns are indispensable. They are the farmers' clearing-houses—a focus for business and social life. They are the outside world in cameo. From them radiate railway tracks, telegraph and telephone wires, that bring the universe to the farmers' doorsteps.

The Grand Trunk Pacific Railway Company has carried the science of town-building farther than its contemporaries. It had to. While other transcontinental builders could go as fast or slow as they pleased, the Grand Trunk Pacific had to span a continent on the stroke of the clock. It could not wait for towns, and especially divisional centers, to spring up voluntarily. It had to create them. Hence the apparent magic, that is really business on mathematical lines.

Half-way between Lake Superior and the Manitoba prairies, in the heart of the virgin forest, the Grand Trunk Pacific town-builders put their pencils on the map and gave orders. Presto. The new town of Graham, with its divisional railway shops, its roundhouses, its stores and banks, springs into being. At the edge of the prairie section they decree another larger railway city, with immense repair shops, car works and foundries. Transcona is born. As the rails are flung Pacific-ward, across the prairies, there spring into being a string of communities, with important divisional centers of the Melville, Watrous, Wainwright and Edson type, at regular intervals.

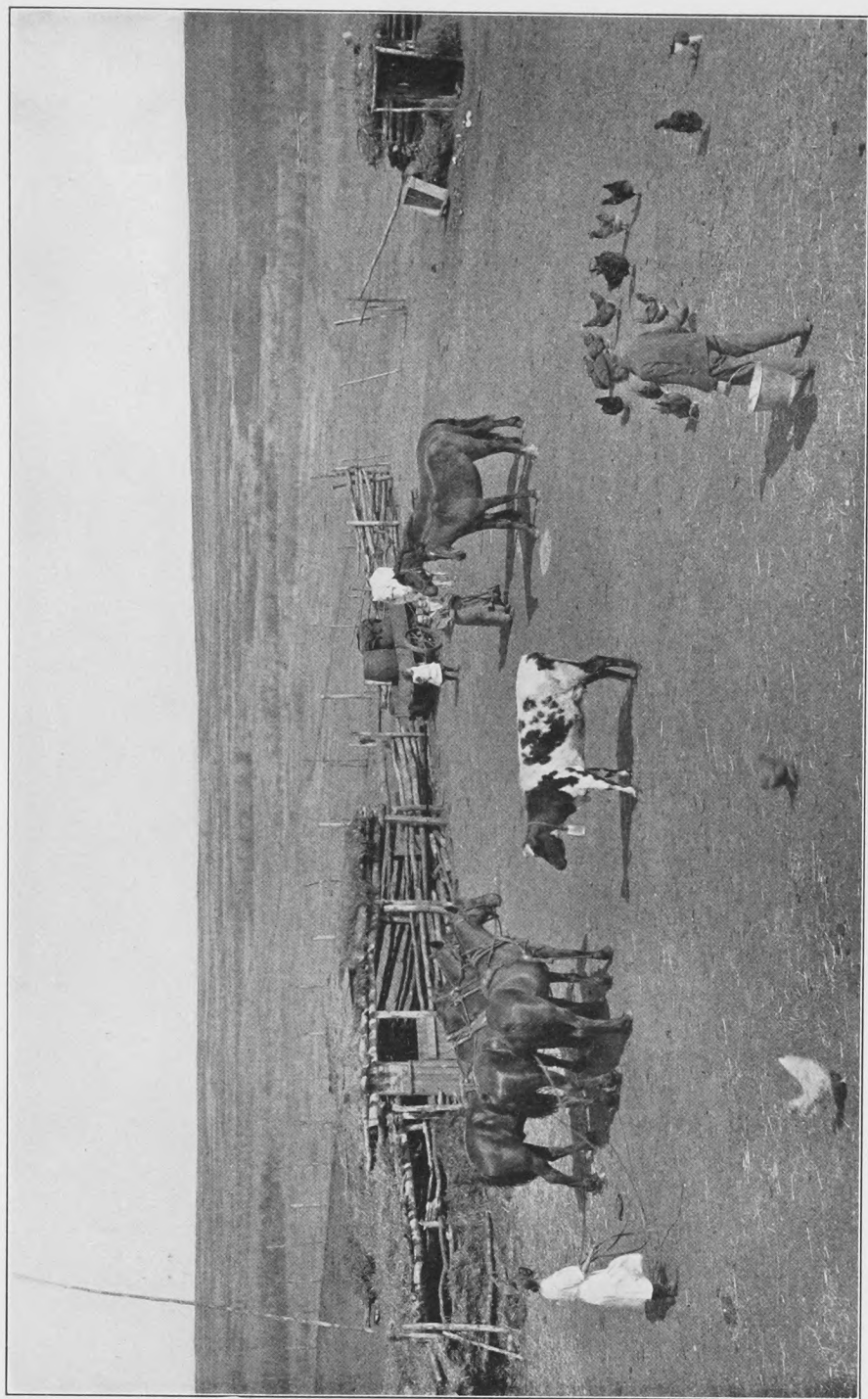
I don't know whether these Grand Trunk Pacific town-builders deliberately planned a de luxe edition or not. Certainly, they got one out when they put Mirror, Alberta, on the map. Mirror is about half-way between Calgary and Edmonton. It is almost in the geographical center of the Province of Alberta—in the heart of one of the richest agricultural sections. It is to be an important divisional center, on the Grand Trunk Pacific's line connecting Calgary and Southern Alberta with the main transcontinental line from Winnipeg to Edmonton.

The townsite of Mirror is natural. That is, the railway company did not have to look for one in that particular location. They found it, ready made, on the west bank of Buffalo Lake, the largest body of fresh water in the province, and a natural summer resort. The townsite is on a ridge with gentle slopes—eastward to the lake, and westward to the railway right of way.

Mirror—though it borrows its name from an English publication, "The London Mirror"—will be a typically cosmopolitan town of the Canadian west. Around it are farming districts of marvelous prosperity. There are rich and vast coal mines in the immediate vicinity. Scientists say that this district is in the heart of the gas and oil belts of Alberta. In natural resources, beauty of location, and future prospects, Mirror is a blue ribbon among the new municipalities.

When the townsite of Mirror was first placed on the market—July 11 and 12, 1911—there were 577 lots sold at auction in 660 minutes. The aggregate purchase price of these lots was \$250,000. That was the beginning. Many more lots have been sold since. Before Mirror was a month old it had two banks, five stores, three lumber yards, one hotel, three restaurants, two pool rooms, a sash and door factory and a newspaper.

The really important feature in all this town building is that conditions require it. The country is being thickly settled with prosperous farmers. Merchants, manufacturers, bankers, artisans, doctors, lawyers, ministers—all the factors in urban population—follow the trails the farmers blaze. It is their door of opportunity.



THE HAPPY HOMESTEADER, NEAR WAINWRIGHT, IN SUNNY ALBERTA

Animal Husbandry along the Grand Trunk Pacific

By E. S. BAYARD

Editor of "The National Stockman and Farmer," Pittsburg, Pennsylvania. Famous breeder of Aberdeen Angus cattle and an executive of the National Aberdeen Angus Association. Authority on beef and dairy cattle.

To the stockman who travels from Edmonton to Winnipeg over the new Grand Trunk Pacific line there seems to be many opportunities for successful animal industry. The splendid native grasses, the good grain, the favorable conditions for the growth of alfalfa and other clovers, peas, vetches and barley, and the abundance of water, all look good to a man who is interested in live stock. The condition of the animals running on the native grasses impresses him very favorably.



E. S. BAYARD

Wheat seems to be the main object now, and on most of the prairie land will probably occupy a leading position for some time to come. But this Grand Trunk Pacific territory has a great deal of land that is not now in high favor with the grain grower and will not be until land becomes scarcer and dearer. The valleys, coulees and territory such as the Touchwood Hills, with more timber and more lakes than the grain grower wants, furnish opportunities for stockmen which have

been neglected to a surprising extent in the rush for wheat land. Considering the good meat markets at Winnipeg and Edmonton, and also among the grain specialists on the line, these cheaper lands look like a "good thing." Horses and cattle can certainly be raised on them now at comparatively slight cost; hogs and sheep will come later, with more fencing and some subduing of the wild land. I was particularly impressed with the opportunities existing in the Touchwood Hills and in some of the coulees, which were being passed over without consideration by prospectors for land. Some day these now cheap lands, judiciously managed in diversified farming and animal husbandry, will be producing great quantities of meats. Here is a combination of grazing land and farming land, with enough of the latter to support in winter as much animal population as the grass will in summer—in other words it is well balanced for live stock husbandry.

Opportunities in grain farming force themselves upon those who travel through Canada. The chances for successful animal husbandry are not so obtrusive, yet they are there, and in their presence the observer wonders why the cities and towns and grain growers of Western Canada must bring mutton from Australia and bacon from Ontario. Where the bison lived the year round, and where antelope multiplied and increased, domestic grazing animals will certainly do well. Such has been the case in the United States, at least. With clovers, peas, oats and barley, hogs will prosper, and it seems strange that they are so few. All along this line all meats fetch a good price, because there is little local production in spite of the fact that natural conditions are quite favorable for it.



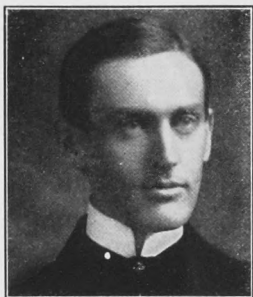
Steel Bridge over the Pembina River, Alberta.
A trainload of settlers' effects on the line of the Grand Trunk Pacific Railway.

Land Values along the Grand Trunk Pacific

By *HOWARD N. WHITNEY*

Editor of the "Register and Farmer" of Des Moines, Iowa. Western correspondent for a group of eastern financial papers. For several years editor of the real estate and business departments of the "Register and Leader."

One of the most striking conditions in the great prairie country which stretches away on either side of the Grand Trunk Pacific Railway from Winnipeg to Edmonton, a distance of 793 miles, is the comparatively low prices of the land. An area of some 15,000,000 acres contiguous to the lines of the Grand Trunk Pacific, acknowledged to be one of the greatest regions in the world for the production of small grain, the soil varying from a rich black loam with a sandy subsoil to a sandy loam, most of it rich in vegetable mold, and growing from thirty to forty bushels of wheat to the acre, sixty to one hundred bushels of oats, twenty bushels of flax, forty to sixty bushels of barley and superior vegetables, it is indeed a great agricultural region.



HOWARD N. WHITNEY

Traveling through Central Saskatchewan and Alberta and these newer regions of the Dominion of Canada, is a wonderful revelation of what pioneering is in these twentieth century days. It is a contrast to what

pioneering must have been in Iowa fifty years ago, when development was slow and in an age when modern inventions were not at hand to assist in building up the country.

When man enters upon a land in these later years to possess it, he comes with a twentieth century equipment. There are no weary months of travel behind slow-hoofed oxen drawing a prairie schooner. No nights of exposure out on the open plain are his; no need for constant vigil against the coming of an unknown foe or the depredations of beasts of prey.

He comes in luxurious railroad trains which travel day and night with lightning speed. He puts a monster engine on the unturned sod which draws tremendous plows and discs and seeders and in one mighty trip up and down the fields the crops are sown. He starts the same engine at harvest time, and reapers, binders and threshers garner and thresh out the grain and pile up old nature's bounties mountain high. He loads the grain in speeding trains which carry it to markets in every clime, and his fortune is won.

Yet this does not rob the new country of its romance nor of its adventure. The self-same spirit which stirred the men of '49 to risk their lives and futures in a new land in search of gold, stirs the hearts of the strong men to-day. The chance for wealth, the fight to win the fortune which they feel the new land holds, the stake which lures them to this land of promise, all these stimulate the spirit with unusual hope and buoyancy.

So that it is not strange that cities of the most modern type are builded on these northern prairies in the space of a few years. It is not strange that one

man farms great areas of land and harvests such vast crops in a season's time and amasses a fortune within a few years. This splendid equipment admits doing things on a big scale and thus makes possible great accomplishments.

Much of the farm land is now selling at from \$15 to \$25 per acre. Lands can be found, well-improved and favorably located which sell from \$40 to \$60 per acre. And homestead lands can also be found within reasonable distance from the Winnipeg-Edmonton line of the Grand Trunk Pacific and the branch lines of this road.

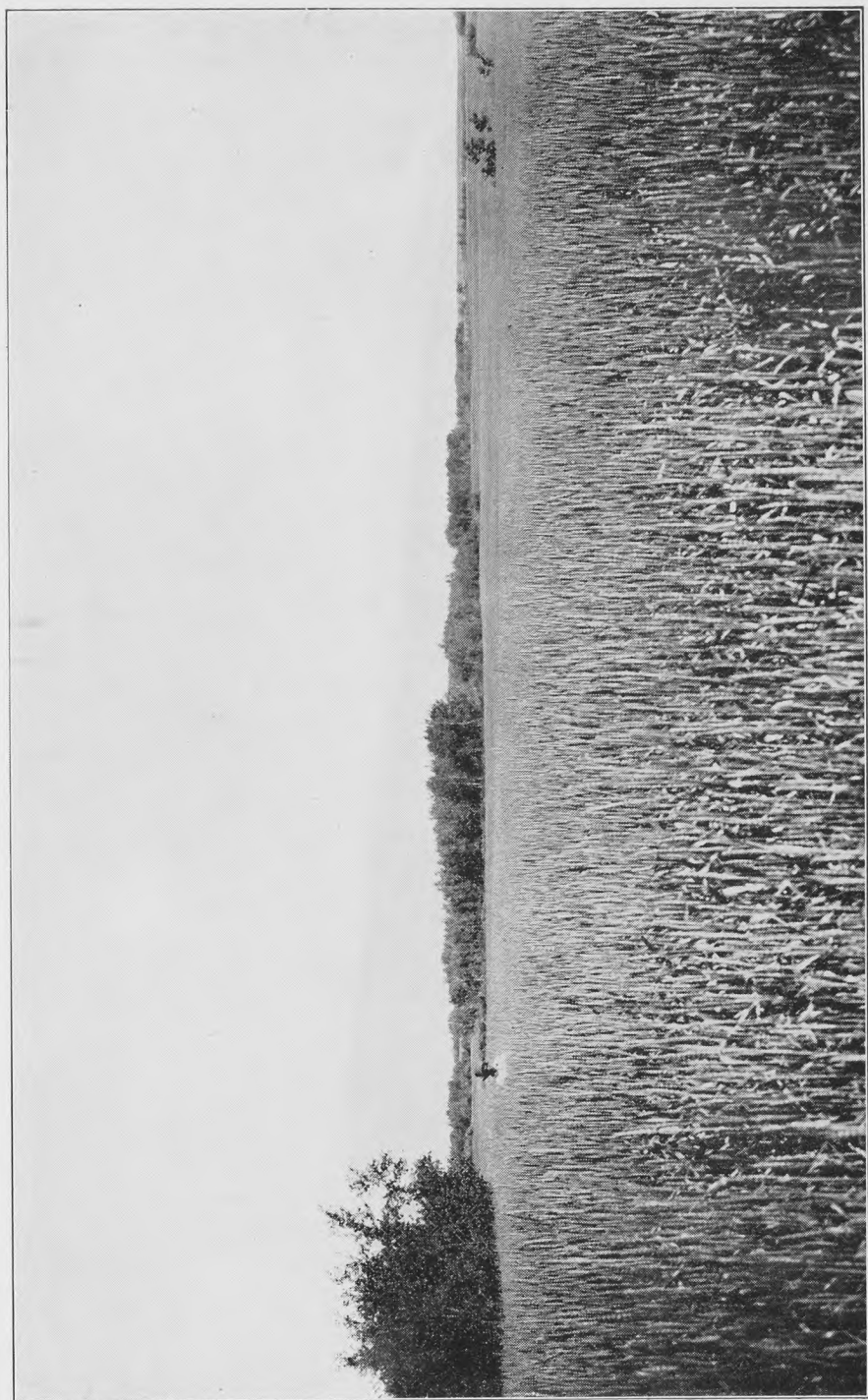
One method of selling land in this new country is the payment of a certain amount per acre down and the balance of the purchase price is extended over a period of years. One typical illustration is cited. A farm of 320 acres, unimproved, was purchased with a payment of \$3 per acre down, or \$960. For breaking and discing the land the cost was \$5 per acre, or \$1,600. That is what it costs when the buyer hires it done. The second payment and interest amounted to \$1,170, and the buildings complete are estimated to cost about \$2,000. This made a total outlay the first year of \$5,730. Over against this the first year 300 acres of wheat yielded thirty bushels to the acre, or 9,000 bushels at 60 cents per bushel, or \$5,400. And 20 acres of oats produced 70 bushels to the acre, or 1,400 bushels at 25 cents per bushel amounting to \$350 or a total from the farm of \$5,750. Thus the farm the first year more than paid for its original cost and the profits of the second year more than paid for the improvements and all other expenses, leaving a goodly profit.

Thus it is that the low prices asked for this productive land is one of the conditions which strikes a man from the States most forcibly. He comes from a region where the farm lands sell from \$100 to \$200 per acre, well improved, productive and favorably located to be sure, but to find such a vast area of wonderfully productive land, with good markets available and prices as high on the average as in the States, is positive proof that there are big opportunities for money making in Canada.

These lands are advancing in value quite naturally. With the tremendous immigration into Western Canada, the great railroad development and the money which is being invested in this new country, the vast prairie region is developing not alone rapidly but substantially. This of course means increased land values and when it is remembered that the land is now very low in price, it is readily seen that there is every reason why it will advance steadily from year to year.



A prairie farmer's town residence in Saskatchewan.



A GOOD MIXED FARMING COUNTRY IN SASKATCHEWAN

SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS

1. Any person who is the sole head of a family, or any male over 18 years old, may homestead a quarter section (160 acres, more or less) of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant, who must be a British subject or declare his intention of becoming one, must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any agency, by father, mother, son, daughter, brother or sister of intending homesteader, when duly authorized on proper form.

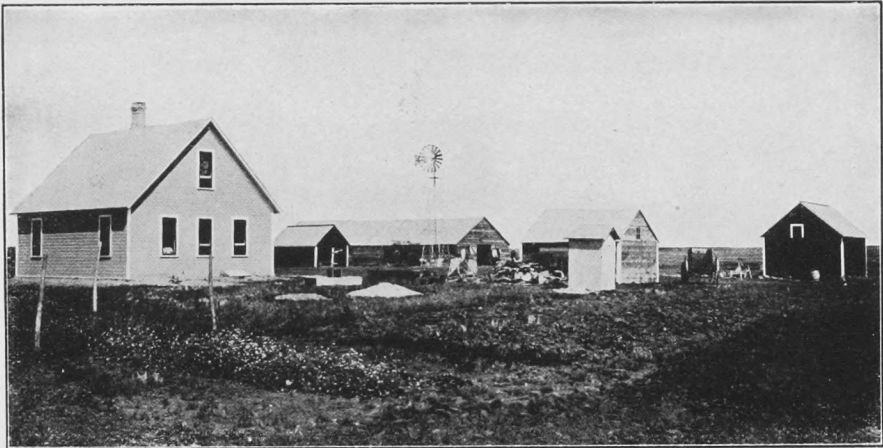
2. A widow having minor children of her own dependent upon her for support is permitted to make homestead entry as the sole head of a family.

DUTIES.—Six months residence upon and cultivation of the land in each of three years and the erection of a habitable house. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

3. In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price \$3 per acre. Duties.—Must reside six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate 50 acres more than required on his homestead, which cultivation may be on both his homestead and pre-emption or either.

4. A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may acquire a homestead by purchase in certain districts. Price \$3 per acre. Such homesteads may be acquired on any available lands on either odd or even numbered sections south of township 45, east of the railway from Calgary to Edmonton and the west line of range 26, and west of the third Meridian. Duties.—Must reside six months in each of three years, cultivate 50 acres and erect a house worth \$300.

The entry fee for a homestead is ten (\$10) dollars.



The first year on the farm.

SETTLERS' FREIGHT RATES

Low rates for settlers' effects apply from Eastern Canada and many United States points to Winnipeg and West.

The following is a summary of the Customs and Freight regulations:

CUSTOMS REGULATIONS

Item 705 of the Customs Tariff (1907), for free entry of settlers' effects, reads as follows:

705. Settlers' effects, viz.:—Wearing apparel, books, usual and reasonable household furniture and other household effects; instruments and tools of trade, occupation or employment, guns, musical instruments, domestic sewing machines, typewriters, bicycles, carts, wagons and other highway vehicles, agricultural implements and live stock for the farm, not to include live stock or articles for sale, or for use as a contractor's outfit, nor vehicles or implements moved by mechanical power, nor machinery for use in any manufacturing establishment; all the foregoing if actually owned abroad by the settler for at least six months before his removal to Canada, and subject to regulations prescribed by the Minister of Customs: Provided that any dutiable article entered as settlers' effects may not be so entered unless brought by the settler on his first arrival, and shall not be sold or otherwise disposed of without payment of duty until after twelve months' actual use in Canada.

A settler may bring into Canada, free of duty, live stock for the farm on the following basis, if he has actually owned such live stock abroad for at least six months before his removal to Canada, and has brought them into Canada within one year after his first arrival, viz.:

If horses only are brought in, 16 allowed.

If cattle only are brought in, 16 allowed.

If sheep only are brought in, 160 allowed.

If swine only are brought in, 160 allowed.

If horses, cattle, sheep and swine are brought in together, or part of each, the same proportions as above are to be observed.

Duty is to be paid on the live stock in excess of the number above provided for.

For Customs entry purposes a mare with a colt under six months old is to be reckoned as one animal; a cow with a calf under six months old is also to be reckoned as one animal.

Cattle and other live stock imported into Canada are subject to Quarantine Regulations.

The settler will be required to take the following oath:

I,, do hereby solemnly make oath and say that all the Goods and Articles hereinbefore mentioned are, to the best of my knowledge and belief, entitled to Free Entry as Settlers' Effects, under the tariff of duties of Customs now in force, and that all of them have been actually owned by myself for at least six months before my removal to Canada; and that none of the goods or articles shown in this entry have been imported as merchandise or for use in any manufacturing establishment or as a contractor's outfit or for sale, and that I intend becoming a permanent settler within the Dominion of Canada, and that the "Live Stock" enumerated and described in the entry hereunto attached is intended for my own use on the farm which I am about to occupy (or cultivate), and not for sale or speculative purposes, nor for the use of any other person or persons.

Sworn to before me.....this.....day
of....., 191..

Collector.....

FREIGHT REGULATIONS

1. Carloads of Settlers' Effects, within the meaning of the settlers' tariff, may be made up of the following described property for the benefit of actual settlers, viz.: Live stock, any number up to but not exceeding ten (10) head, all told, viz.: Cattle, calves, sheep, hogs, mules, or horses; household goods and per-

sonal property (second-hand); wagons or other vehicles for personal use (second-hand); farm machinery; implements, and tools (all second-hand); softwood lumber (pine, hemlock, or spruce—only) and shingles, which must not exceed 2,000 feet in all, or the equivalent thereof; or in lieu of, not in addition to, the lumber and shingles, a portable house may be shipped; seed grain, small quantity of trees or shrubbery; small lot live poultry or pet animals; and sufficient feed for the live stock while on the journey. Settlers' Effects rates, however, will not apply on shipments of second-hand wagons, buggies, farm machinery, implements, or tools, unless accompanied by household goods.

2. Should the allotted number of live stock be exceeded, the additional animals will be charged for at proportionate rates over and above the carload rate for the Settlers' Effects, but the total charge for any one such car will not exceed the regular rate for a straight carload of live stock.

3. Passes.—One man will be passed free in charge of live stock when forming part of carloads, to feed, water, and care for them in transit. Agents will use the usual form of live stock contract.

4. Less than carloads will be understood to mean only household goods (second-hand), wagons or other vehicles for personal use (second-hand), and (second-hand) farm machinery, implements, and tools. Less than carload lots must be plainly addressed. Minimum charge on any shipment will be 100 pounds at regular first-class rate.

5. Merchandise, such as groceries, provisions, hardware, etc., also implements, machinery, vehicles, etc., if new, will not be regarded as Settlers' Effects, and, if shipped, will be charged at the regular classified tariff rates. Agents, both at loading and delivering stations, therefore, give attention to the prevention of the loading of the contraband articles and see that the actual weights are way-billed when carloads exceed 24,000 pounds on lines north of St. Paul.

6. Top Loads.—Agents do not permit, under any circumstances, any article to be loaded on the top of box or stock cars; such manner of loading is dangerous and absolutely forbidden.

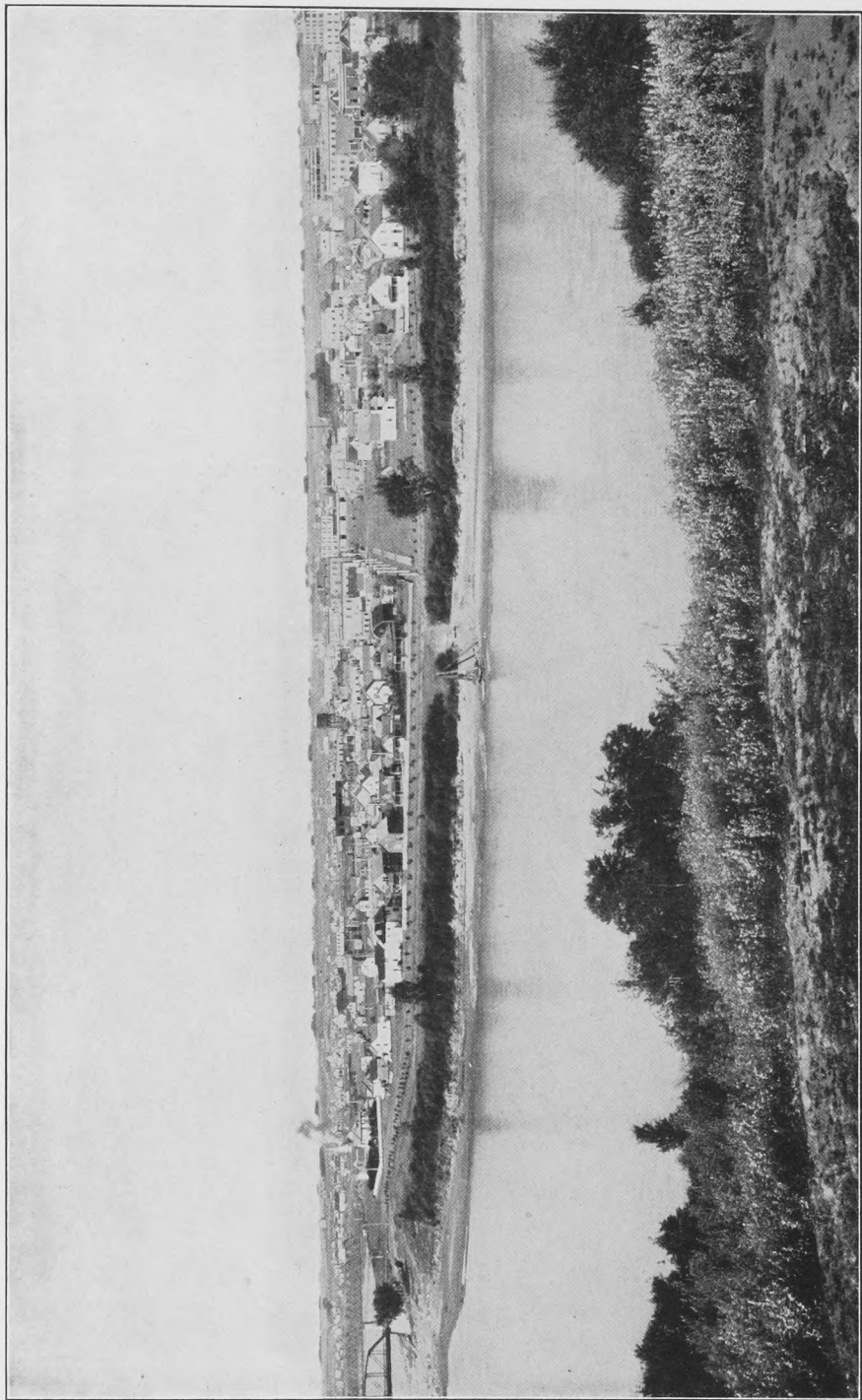
7. Settlers' Effects, to be entitled to the carload rates, cannot be stopped at any point short of destination for the purpose of unloading part. The entire carload must go through to the station to which originally consigned.

8. The carload rates on Settlers' Effects apply on any shipment occupying a car weighing 24,000 pounds or less. If the carload weigh over 24,000 pounds, the additional weight will be charged for. North of St. Paul, Minn., 24,000 pounds constitutes a carload, between Chicago and St. Paul and Kansas City or Omaha and St. Paul a carload is 20,000 pounds. From Chicago and Kansas City north to St. Paul any amount over this will be charged extra. From points South and East of Chicago, only five horses or heads of live stock are allowed in carloads, any over this will be charged extra; carload 12,000 pounds minimum.

9. Minimum charge on any shipment will be 100 pounds at first-class rate.

QUARANTINE OF SETTLERS' CATTLE

Settlers' cattle must be inspected at the boundary. Inspectors may subject any cattle showing symptoms of tuberculosis to the tuberculin test before allowing them to enter. Any cattle found tuberculous to be returned to the United States or killed without indemnity. Settlers' horses are admitted on inspection if accompanied by certificate mallein test signed by United States Bureau Inspector. If not so accompanied will be tested at boundary. Certificate from any others not accepted. Horses found to be affected with glanders within six months of



SASKATOON, SASKATCHEWAN, WESTERN CANADA

entry are slaughtered without compensation. Sheep may be admitted subject to inspection at port of entry. If disease is discovered to exist in them, they may be returned or slaughtered. Swine may be admitted, when forming part of settlers' effects, but only after a quarantine of thirty days, and when accompanied by a certificate that swine plague or hog cholera has not existed in the district whence they came for six months preceding the date of shipment; when not accompanied by such certificate, they must be subject to inspection at port of entry. If diseased, to be slaughtered, without compensation.

A SYNOPSIS OF WESTERN CANADA'S STRIKING PROGRESS

The tables of statistics herewith presented should prove of great interest to all industrial, financial and commercial concerns all over the country.

Beginning with twelve of our Western cities, we have the following astonishing growth:

	1901	1906	1911	1912
Brandon	5,020	10,408	13,837	16,000
Calgary	4,091	11,976	43,736	74,000
Edmonton	2,626	11,167	24,882	60,000
Lethbridge	2,072	2,313	8,048	13,000
Medicine Hat	1,570	3,020	5,572	12,000
Moose Jaw	1,558	6,249	13,825	25,000
Portage la Prairie.....	3,091	5,106	5,885	7,000
Prince Albert	1,785	3,005	6,254	10,000
Regina	2,249	6,169	30,210	35,000
Saskatoon	113	3,011	12,002	27,000
Winnipeg	42,340	90,153	135,430	200,000

These cities in 1912 spent \$83,650,653 on new buildings.

THE RUSH OF IMMIGRATION INTO WESTERN CANADA FOR THE YEAR 1912

From Great Britain and Ireland.....	145,859
From United States	140,143
From other countries	109,802
Total	395,804

In the last five years, ending March 31, 1911, immigrants brought into the country cash and settlers' effects as follows:

British, cash	\$90,110,400
British, settlers' effects	45,055,200
United States, cash	187,712,000
United States, settlers' effects.....	130,098,000
Non-English Speaking, cash.....	2,305,000
Total	\$455,280,600

It is estimated that Western Canada has 171,000,000 acres of wheat lands.

Total arable land in the three provinces, 357,016,778 acres, less than six per cent of which is under cultivation.

The Province of Saskatchewan doubled its dairy output.

Over \$10,000,000 worth of horses was received in the West during 1911.

The total wheat crop for 1912 was estimated at about 200,000,000 bushels.

Although the wheat crop claims first place in the West, the day is not far distant when mixed farm products will run a close second.

Grand Trunk Pacific Railway

In 1911, according to a carefully compiled report in the *Winnipeg Free Press*—

The cattle crop produced	\$9,568,611.00
Hogs	1,538,620.64
Sheep	194,190.25
Butter and cheese.....	2,448,155.31
Potatoes, roots and hay.....	7,818,000.00
Poultry from Manitoba.....	45,933.10

Making a grand total of.....\$21,612,610.30
other than grain, or not far from half of the value of the wheat crop.

The average of butchers' cattle was the highest in five years. The price of export cattle was \$10 per head greater than in 1910. The money received for cattle exceeded that of 1910 by \$2,245,288.

An outstanding feature of the trade was the enormous increase in the butchers' cattle and feeders going to the East. The trade in butchers' cattle to the Eastern markets, from nothing in 1906 rose to 39,845 head.

The increase in feeders was 24,525.

Table showing growth in population of Western Canada for census periods 1891, 1901, 1906, 1911.

	1891	1901	1906	1911
Manitoba	152,506	255,211	365,688	455,614
Saskatchewan	37,626	91,279	257,763	492,432
Alberta		73,022	185,412	374,663
British Columbia	98,173	178,657	*	392,480

*No census figures available.

Wheat crop summary, showing development in acreage and production for Manitoba, Saskatchewan and Alberta.

	Acreage Man.	Acreage Sask.	Acreage Alb.	Total Acres	Yield Bushels
1898	1,488,232	276,253	31,348	1,795,544	31,486,012
1899	1,629,995	328,459	35,690	1,993,544	34,838,861
1900	1,457,396	382,540	30,361	2,516,678	63,315,818
1902	2,039,940	580,860	45,064	2,665,864	67,037,719
1905	2,653,488	1,130,084	107,788	3,881,199	82,175,226
1906	3,141,537	1,730,586	177,127	5,049,250	92,256,531
1908	2,850,640	2,793,563	317,523	5,871,836	96,863,687
1909	2,808,000	3,685,000	385,000	6,878,000	147,482,000
1910	3,014,400	4,848,000	533,000	8,395,400	128,891,000
1911	2,979,734	4,704,660	1,616,900	9,301,294	194,083,000
1912	2,653,100	4,891,500	1,417,230	8,961,800	189,585,000

Statement showing growth of Western Canada in manufacturing.

	In 1900. Number of Establishments	Capital Invested	Value of Products
Manitoba	324	\$7,539,691	\$12,927,439
Saskatchewan }	105	1,689,870	1,964,987
Alberta {			
British Columbia	392	22,901,892	19,447,773
	In 1905.		
Manitoba	354	27,517,297	28,155,732
Saskatchewan	80	3,973,075	2,520,172
Alberta	120	5,545,821	5,116,782
British Columbia	459	53,022,033	38,288,378
	In 1910.		
Manitoba	439	47,941,540	53,673,609
Saskatchewan	173	7,019,951	6,332,132
Alberta	290	29,518,346	18,788,826
*British Columbia	651	123,027,521	65,204,235

*Of the British Columbia manufactures more than one-half of the capital and about one-third of products are connected with the lumber business.

THE SETTLER'S TWELVE COMMANDMENTS

WHEAT RAISING IN A NUTSHELL

(Copyright, Canada, 1910, by Saskatoon Board of Trade.)

1. Break the land one to two inches deep; but as shallow as possible. Turn the sod right over so that the grassy side is lying flat down.
2. Breaking should be done before the end of June, and, if possible, by the middle of that month. THIS IS HIGHLY IMPORTANT, as late breaking will not produce profitable crops.
3. All such early breaking should be back-set during the later summer after the sod has rotted. In back-setting, the sod is simply put back into its original position, the grassy side up, and about one or two inches of earth brought up with the plow to cover it. Disc and harrow immediately after back-setting.
4. Frequently the newcomer does not arrive till late in June. In the case of breaking done late in June, PLOW DEEP—say four inches—and DO NOT BACK-SET; but merely disc thoroughly, and then harrow. The more cultivation, the better.
5. It is sometimes impossible to back-set extra-heavy land. In this case the land should be treated as per FOURTH commandment, whether it is early or late breaking.
6. In spring, harrow and sow as soon as the frost is out of the ground sufficiently to allow the seeder to go down the proper depth. Follow the seeder with a land packer, and the packer with a harrow. The use of the land packer will add at least five bushels per acre to the crop.
7. DEPTH TO SOW: Scrape back the surface of the ground with the hand so as to ascertain the depth of the moisture from the surface. Adjust the seeder so that it will sow in the top of the moisture—not above it, nor deep into it, but just in the top of it.
8. SOW THE BEST, THOROUGHLY-CLEANED SEED OBTAINABLE, and nothing else. Pay for the BEST—and get it.
9. After harvesting the first crop, the land should either be plowed, disced and packed in the fall; or, where the soil is clean, the stubble may be burned off, in the spring, the land disced without plowing, and a second crop sown, as per SIXTH commandment.
10. Summer fallowing should start after the SECOND crop is taken off. Plow the summer fallow as soon as possible after seeding the other land you are cropping. NEVER leave this plowing till after June. Experience has proved that one early plowing is better than two. Weeds absorb moisture. Keep down weeds by cultivation, and so conserve the moisture in your summer fallow. In the spring fallowing put in your crop as per SIXTH commandment.
11. After cutting first crop from summer fallow, allow the land to lie till the following spring—then, simply burn off the stubble, disc up the surface and put in second crop as per SIXTH commandment. This second crop, if so put in, should be almost as good as the first summer-fallow land EVERY THIRD YEAR.
12. Sow a bushel and a half on new breaking and on summer fallow, and a bushel and a quarter on stubble. Before sowing, all seed should be treated for Smut.

SENATOR E. J. MEILICKE,

Dundurn, Sask.

HON. W. C. SUTHERLAND,

Speaker Provincial House, Saskatoon, Sask.

COMMISSIONER F. MACLURE SCLANDERS,

Saskatoon Board of Trade.

DOMINION LAND OFFICES

J. BRUCE WALKER, Commissioner of Immigration, Winnipeg, Man.

DISTRICT.	NAME OF AGENT.	POST OFFICE ADDRESS.
Battleford.....	W. R. Ridington.....	Battleford, Saskatchewan.
Edmonton.....	Alexander Norquay.....	Edmonton, Alberta.
Red Deer.....	W. H. Cottingham.....	Red Deer, Alberta.
Humboldt.....	Thomas J. Oliver.....	Humboldt, Saskatchewan
Saskatoon.....	U. A. MacInnis.....	Saskatoon, Saskatchewan
Wetaskiwin.....	Business transacted at Edmonton.	
Yorkton.....	Jos. A. Duncan.....	Yorkton, Saskatchewan

Land settlers' certificates entitling bona fide settlers to special fares on the Grand Trunk Pacific Railway will be issued by the following:

Canadian Government Immigration Agents in the United States

M. V. McInnes, 176 Jefferson Ave., Detroit, Mich.
J. B. Carbonneau, Jr., Biddeford, Me.
Max A. Bowlby, 73 Tremont St., Boston, Mass.
C. J. Broughton, Room 412, 112 W. Adams St., Chicago, Ill.
W. E. Black, Grand Forks, N. Dak.
Benj. Davies, Room 6, Dunn Block, Great Falls, Mont.
Jas. Maw, 210 North 3rd St., Harrisburg, Pa.
G. W. Aird, 215 Traction-Terminal Building, Indianapolis, Ind.
George A. Cook, 125 West 9th Street, Kansas City, Mo.
C. A. Laurier, Marquette, Mich.
Geo. A. Hall, 123 Second Street, Milwaukee, Wis.
J. A. Laferrière, Manchester, N. H.
W. V. Bennett, 220 17th Street, Room 4, Bee Bldg., Omaha, Neb.
Elzéar Gingras, 29 Weybosset Street, Providence, R. I.
R. Laurier, 222 Hoyt Street, Saginaw, Mich.
J. S. Crawford, 301 E. Genesee Street, Syracuse, N. Y.
R. A. Garrett, 315 Jackson Street, St. Paul, Minn.
J. N. Grieve, Cor. 1st and Post Streets, Spokane, Wash.
W. S. Nethery, 413 Gardner Bldg., Toledo, Ohio.
J. M. MacLachlan, Box 197, Watertown, S. D.
Frank H. Hewitt, Des Moines, Iowa.

LIST OF PRINCIPAL GRAND TRUNK RAILWAY SYSTEM AGENTS

For further particulars regarding Routes, Rates, Maps, Literature and other information apply to the nearest Grand Trunk Railway Agent. See List below.

Alexandria Bay, N. Y.	Cornwall Bros	.....	Ticket Agents, Market Street.
Battle Creek, Mich.	L. J. Bush	.....	Passenger Agent, G. T. Ry. Station.
Bay City, Mich.	Geo. W. Watson	.....	Passenger Agent, G. T. Ry. Station.
Boston, Mass.	E. H. Boynton	.....	New England Passenger Agent, 256 Washington Street.
Brockville, Ont.	J. H. Fulford	.....	Ticket Agent, 8 Court House Avenue.
Buffalo, N. Y.	H. M. Morgan	.....	City Passenger and Ticket Agent, 285 Main Street, (Ellicott Sq. Bldg.)
Chicago, Ill.	C. G. Ortenburger	.....	City Passenger and Ticket Agent, 301 So. Clark St. cor. Jackson Bld'g.
Cortland, N. Y.	D. P. Drewery	.....	Traveling Passenger Agent, 6 Burgess Block.
Detroit, Mich.	C. M. Harwood	.....	City Passenger and Ticket Agent, 118 Woodward Avenue.
Flint, Mich.	V. A. Bovee	.....	Passenger Agent, G. T. Ry. Station.
Fort William, Ont.	Ray Street & Co.	.....	Ticket Agents, 201-203 Simpson Street.
Grand Rapids, Mich.	C. A. Justin	.....	City Passenger and Ticket Agent, 78 Monroe Ave., Morton House Bldg.
Hamilton, Ont.	C. R. Morgan	.....	City Passenger and Ticket Agent, 11 James Street North.
Kansas City, Mo.	W. M. Lewis	.....	Traveling Passenger Agent, 327 Sheildy Building.
Kingston, Ont.	J. P. Hanley	.....	City Passenger and Ticket Agent, 67 Earl Street.
Lansing, Mich.	F. H. Potter	.....	Passenger Agent, G. T. Ry. Station.
Lewiston, Me.	F. P. Chandler	.....	Passenger Agent, G. T. Ry. Station.
London, Ont.	R. E. Ruse	.....	City Passenger and Ticket Agent, corner Richmond & Dundas Streets.
Los Angeles, Cal.	W. H. Bullen	.....	Pacific Coast Agent, 302 Wilcox Building.
Milwaukee, Wis.	Crosby Transfer Co.	.....	396 East Water Street.
Moncton, N. B.	J. H. Corcoran	.....	Traveling Passenger Agent, 868 Main Street
Montreal, Que.	J. Quinlan	.....	District Passenger Agent, Bonaventure Station.
"	W. H. Clancy	.....	City Passenger and Ticket Agent, 122 St. James Street.
Mt. Clemens, Mich.	Casper Czizek	.....	City Passenger and Ticket Agent, 12 South Gratiot Avenue.
New York, N. Y.	F. P. Dwyer	.....	General Agent, Passenger Dept., Railway Exchange, 290 Broadway.
Niagara Falls, N. Y.	W. B. Prescott	.....	City Passenger and Ticket Agent, 1 Fall Street.
Ogdensburg, N. Y.	Geo. S. Meagher	.....	Ticket Agent, 55 State Street.
Ottawa, Ont.	Percy M. Buttler	.....	City Pass. and Tkt. Agt., Russell House Bldg., cor. Sparks and Elgin Sts.
Peterboro, Ont.	B. A. Rose	.....	City Passenger and Ticket Agent, 334 George Street.
Pittsburg, Pa.		.....	Traveling Passenger Agent, 507 Park Building.
Port Huron, Mich.	T. C. Mann	.....	Ticket Agent, G. T. Ry. Station.
Portland, Me.	C. E. Tenny	.....	Passenger Agent, G. T. Ry. Station.
Portland, Ore.	Dorsey B. Smith	.....	City Passenger Agent, 69 Fifth Avenue, Commercial Club Building.
Prince Rupert, B. C.	A. E. McMaster	.....	General Agent, Centre Street.
Quebec, Que.	Geo. H. Stott	.....	C. P. & T. A., cor. St. Anne & DuFort Sts. & Ferry Ldg., Dalhousie St.
Saginaw, Mich.	Hugh E. Quick	.....	Passenger Agent, G. T. Ry. Station.
San Francisco, Cal.	F. W. Hopper	.....	General Agent, Passenger Department, 399 Monadnock Building.
Seattle, Wash.	J. H. Burgis	.....	General Agent, Passenger Department, First Avenue and Yesler Way.
Sherbrooke, Que.	C. H. Foss	.....	City Passenger and Ticket Agent, 2 Wellington Street.
South Bend, Ind.	C. A. McNutt	.....	Passenger Agent, G. T. Ry. Station.
St. Paul, Minn.	W. J. Gilkerson	.....	Traveling Passenger Agent, 400 Robert Street.
Toronto, Ont.	C. E. Horning	.....	District Passenger Agent, Union Station.
"		.....	City Passenger and Ticket Agent, Northwest cor. King and Yonge Sts.
Vancouver, B. C.	W. E. Duperow	.....	General Agent, Passenger Department, 527 Granville Street and G. T. P. Dock, foot of Main St.
Victoria, B. C.	C. F. Earle	.....	City Passenger and Ticket Agent, G. T. P. Dock.
Winnipeg, Man.	W. J. Quinlan	.....	District Passenger Agent, 260 Portage Avenue.

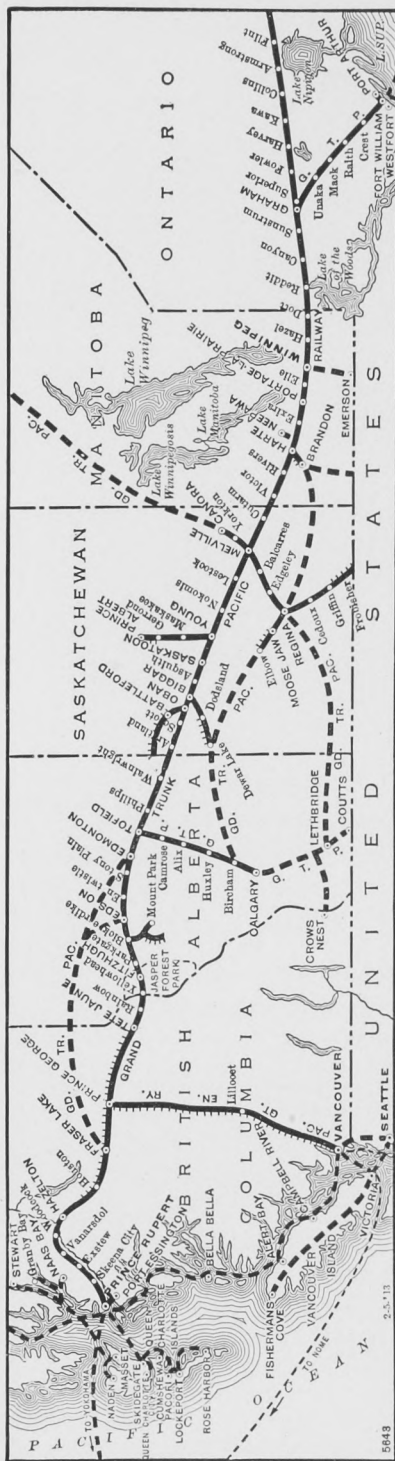
European Traffic Department.

F. C. Salter, European Traffic Manager, 17-19 Cockspur Street, London, S. W., England.			
Antwerp, Belgium	P. A. Clews	.....	Acting General Agent, 19-21 Canal des Brasseurs.
Birmingham, Eng.	Morison, Pollexfen & Blair	.....	No. 6 Victoria Square.
Glasgow, Scotland	J. M. Walker	.....	General Agent, 75 Union Street.
Liverpool, Eng.	Wm. Cuthbertson	.....	General Assistant, 20 Water Street.
London, S. W., Eng.	F. G. English	.....	General Agent, Freight Department, 17-19 Cockspur Street.
London, S. W., Eng.	J. Herson	.....	Passenger Agent, 17-19 Cockspur Street.
London, E. C., Eng.	P. A. Clews	.....	City Agent, 44-45-46 Leadenhall Street.
Paris, France	Pitt & Scott	.....	Ticket Agents, 47 Rue Cambon.
Sheffield, Eng.	J. W. Dawson	Agent, No. 7 Haymarket.

W. E. Davis,
Pass'r Traffic Mgr.,
MONTREAL.

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Write to nearest agent of the Grand Trunk for particulars.

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The central interior embracing three-quarters of the area of arable lands of the Province, all to be served by the Grand Trunk Pacific Railway within two years; a large part of it in 1913.

The central interior of British Columbia being opened up by the Grand Trunk Pacific will afford splendid opportunities for every branch of agriculture, dairying and fruit culture.

There are the valleys along the Skeena River east from Prince Rupert, with soil and climatic conditions perfect for fruit growing under natural conditions, irrigation unnecessary, thereby insuring superior flavor and quality with less care than in any other section of the Western or Pacific Coast States.

Pre-emption lands still available at \$1.00 per acre. No experimentation necessary, existing orchards and berry plantation prove the case.

The richness of the natural meadows and success accomplished in growing cereals in the interior between Hazelton and the eastern boundary of the Province proclaim the wealth awaiting mixed farming operations, dairying and stock raising. Pre-emption lands at \$1.00 per acre available but being taken up rapidly.

The markets are already made and will absorb an unlimited quantity of produce at high prices. Settlers are making fortunes in selling produce to the railway contractors, prospectors and miners in this land of sunshine and temperate climate.

"Plateau and Valley Lands" pamphlet issued by the Grand Trunk Pacific Railway tells about this land of fortune. Ask nearest Grand Trunk or Grand Trunk Pacific Agent for it, or write direct to

W. P. Hinton,
General Passenger Agent,
Winnipeg, Man.

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The Grand Trunk System's European Organization



GRAND TRUNK SYSTEM OFFICES
LONDON, ENGLAND.

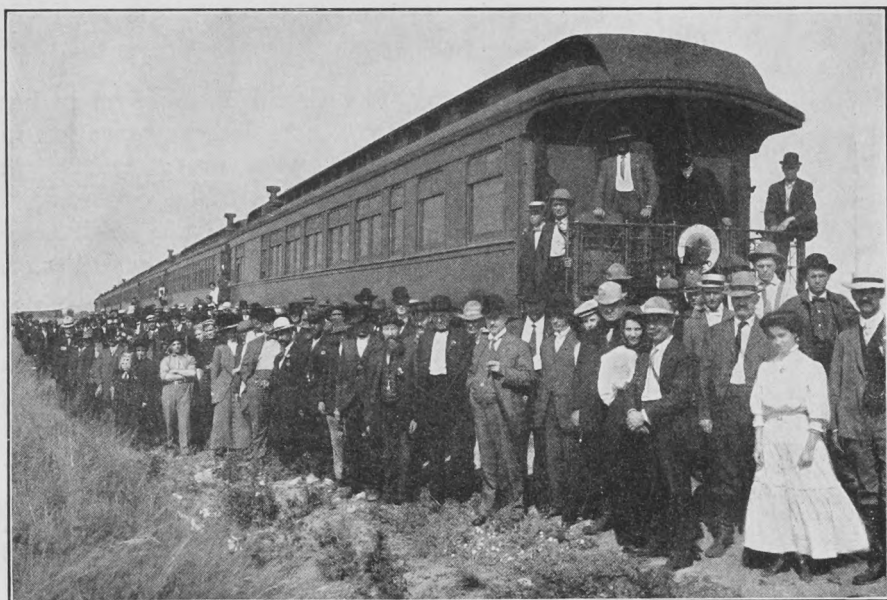
The Grand Trunk System has a most complete organization in Europe with every facility at their disposal to help passengers to reach their points of destination in Canada and United States, and at their different offices, a list of which can be found in this publication, ocean and rail tickets are issued and arrangements can be made for forwarding baggage and covering same with insurance. They are also in a position to supply travelers with convenient forms for carrying money, viz.: Canadian Express Money Orders, which may be cashed anywhere in dollars and cents. It will be to the advantage of travelers to consult with any of the European Agencies where the latest publication dealing with Canada can be secured free.

Trans-Atlantic passengers visiting London, Eng., are cordially invited to visit the handsomely equipped new offices of the Grand Trunk System at 17-19 Cockspur Street, London, S. W., Eng. The site of this new building is one of the best in the great Metropolitan City and in the midst of the busiest center of London; in fact it is at the very hub of the world's metropolis. It is within five minutes' walk of a half dozen of the leading hotels, and adjacent to Trafalgar Square, Bakerloo and Piccadilly Tubes. Motor busses pass the door every few seconds to all parts of London—North, South, East and West.

Reception rooms have been sumptuously furnished for the use and comfort of visitors, where writing material may be found and the leading daily newspapers of Canada are on file.

The Grand Trunk are in a position to book passages to Canada and the United States via any of the Ocean routes. This is a great convenience to tourists and business men visiting England or the Continent.

Courteous representatives of the Company are in attendance to give all information to enquirers, and to see that visitors are made at home. If desired, correspondence may be addressed in care of this office.



Land Seekers on the line of the Grand Trunk Pacific Railway.
Out of this Party of 189, 185 Purchased Land on which they have Since Settled.

AN ANNOUNCEMENT

The Grand Trunk Pacific Railway *has no land for sale*, other than townsite lots. In the interests of its colonization work solely, the Grand Trunk Pacific has collected particulars regarding available lands for purchase for the convenience and ready reference of those interested in Western Canada, but who do not wish to acquire lands by the homestead method.

It is designed that all communications concerning any of these lands shall be directed to the General Passenger Agent, Grand Trunk Pacific Railway, Winnipeg, or to any of the district or local passenger agents of the Grand Trunk System, who will endeavor to furnish such further information as required and will advise as to the district or location in which the requirements of the settler correspondent may be satisfied; also bring the buyer and seller in contact when desired.

Pains will be taken to find a suitable location for actual settlers intending to purchase farms along the line of the Grand Trunk Pacific.

It is anticipated that the territory penetrated by the Grand Trunk Pacific Railway, which is the most fertile section of Western Canada, will fill up rapidly, so that many of the lands now available will be purchased shortly and prices fluctuate so that it behooves the prospective settler to get in touch with the existing conditions as to lands for purchase and free homesteads. The latest information concerning any particular location will be cheerfully furnished as promptly as possible upon application to agents shown on preceeding pages of this publication.

W. P. HINTON, General Passenger Agent,
Grand Trunk Pacific Railway, Winnipeg.